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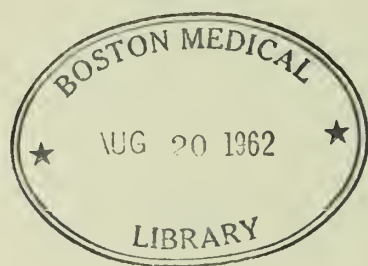


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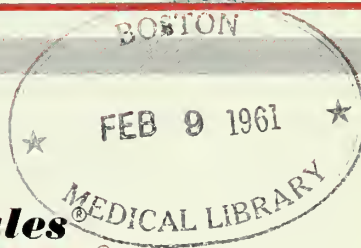


JANUARY, 1961

Volume 54

Number 1

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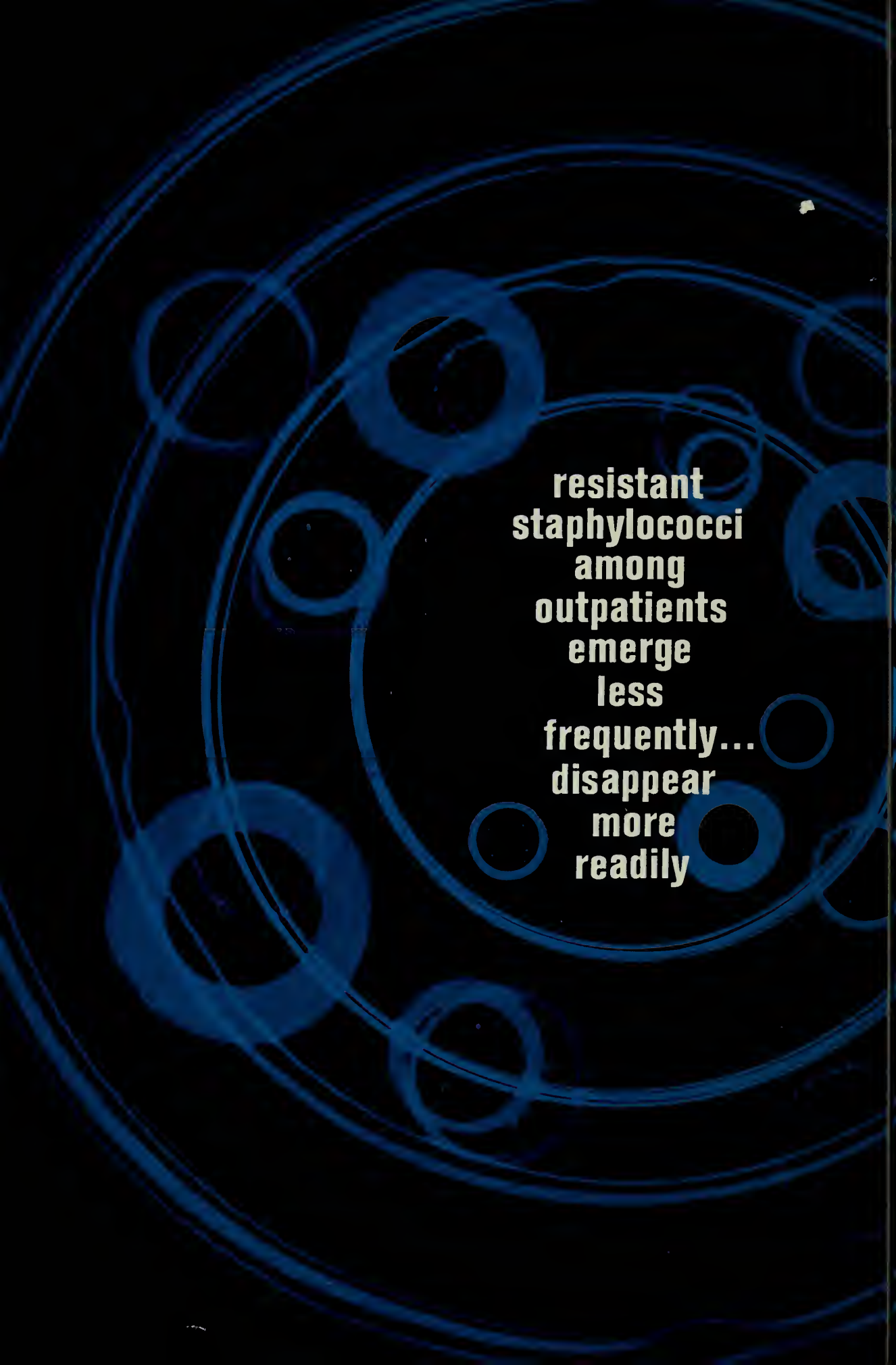
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Journal of the Tennessee State Medical Association

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Volume 54

JANUARY, 1961

No. 1

A review of the research being done upon the etiologic and therapeutic aspects of malignant lesions shows that progress is being made, and all hope for a "break-through" of knowledge regarding causes.

Some apparent etiologic factors seem most certain to play a role in malignancy.

Progress in Cancer Research and Control*

J. R. HELLER, M.D., New York, New York

Cancer has become increasingly a subject of interest and concern to both the public and the scientific and medical profession. This has come about, I believe, for three reasons. First, there is more cancer. Second, we can do more about it, and third, the pace and progress of research in the cancer field has accelerated enormously in recent years.

I am sure you are all well aware of the increase in the number of cancer patients. Cancer ranked seventh as a cause of death in 1900, had climbed to fourth place by 1925 and now is second only to the cardiovascular disorders. Some 450,000 new cases of cancer are diagnosed every year, about 700,000 persons are under treatment for cancer and, if the present trends continue, 40 million Americans now living will develop cancer and 26 million of them will die of it. This increase has come about, of course, largely as a result of medical progress in other fields, leading to conquest of the older killers and increased longevity of the population. Nevertheless, the problem becomes increasingly urgent.

Steady gains have been made in the control of the disease. In the early 1900's, a cancer patient had little chance of being cured of his disease. Twenty years ago, one of every four cancer patients survived, and today the disease is apparently being eliminated in one of every three patients, some 150,000 men, women and children a year.

Furthermore, and this is a primary challenge to all of us now working in this field, this rate of cure can be substantially improved merely by the better application of what we already know, by shortening the gaps between the time the first sign of cancer appears and the time that definitive treatment is given. This is largely a matter of education—public education to encourage patients to have regular health examinations, to recognize warning symptoms, and to consult their physicians promptly, and of professional education to make physicians more cancer-conscious and to train young doctors in the skills of cancer detection and treatment. It is estimated that improvement in these areas alone would increase the overall cure rate for cancer to 50 per cent.

Cancer Detection

One vital link in the chain of events leading to prompt cancer treatment is detection of the disease. The search for a simple serologic test for systemic cancer continues, but so far this goal has not been achieved. In the meantime, the thorough physical examination of apparently healthy men and women—whether in the office of the private doctor or in the special clinic—offers the best chance of uncovering cancer in its early, asymptomatic stage. Results of the cytologic survey for uterine cancer conducted a few years ago in Memphis¹ clearly illustrates the value of the Papanicolaou test for cancers of the female genital area, the second most common site of cancer among women. Among 108,000 women ex-

*Presented at the Tennessee Valley Medical Assembly, September 27, 1960. Dr. J. R. Heller, President, Memorial Sloan-Kettering Cancer Center, New York, N. Y.

amed, about 800 cases of cancer were detected and later diagnosed microscopically. Half of these proved to be intra-epithelial carcinoma, which has an extremely high cure rate. Ninety per cent of these were unsuspected. In a second survey of some of the same women one year later, the detection rate for invasive cancer had dropped from 3.4 per thousand to 0.3 per thousand; in other words, most of these cancers develop slowly, and before they become invasive, there is ample time for their detection in the early, generally curable stage.

Day and his associates² at Strang Cancer Prevention Clinic have been conducting follow-up studies of patients referred for treatment during 1954 in order to analyze and evaluate their experience with early detection procedures. Of 25 patients with rectal and colon lesions (including 11 patients with polyps, which are routinely considered premalignant by the Strang group), 22 show no present evidence of disease. Of the 23 patients detected in 1954 with breast cancer, 20 show no present evidence of disease. These survival rates of well over 80 per cent offer a very cogent argument in favor of the routine cancer examination.

Advances in Cancer Treatment

Improvements in methods for definitive cancer treatment also play an important role in the present more favorable outlook for the cancer patient, and I do not believe we have yet reached the limits of curative cancer surgery and radiation. Many of us are watching with great interest to see if local use of alkylating agents immediately postoperatively to prevent dissemination of cancer cells from the operative site will improve cure rates for the disease.³ Another area of particular pertinence to the cancer surgeon are the many studies on tissue transplantation now underway. If ways could be found to breach the immunologic barrier, vital organs invaded by cancer could be removed and replaced. Recent studies at Memorial Sloan-Kettering have shown that some cancer patients, presumably because of some decrease in a factor of natural resistance, will accept skin transplants—and so presumably transplants of other organs—far more readily than persons who do not have cancer. In two in-

stances, long term survival of grafts of tissue from other species (pig skin) have been obtained.⁴ If this specific defense factor could be similarly depressed in other cancer patients, the horizons of curative surgery would be expanded enormously.

Statistical emphasis on cancer "cure" or "survival" rates should not lead us to overlook what the physicians now can provide in terms of useful palliation for many cancer patients. A number now can live for years with their cancers, perhaps for their normal life span, if they have competent and intelligent medical care. Surgery and x-ray play a useful role in palliative treatment, of course, as does the control of secondary problems, such as infection and electrolyte imbalance. In addition, there is an increasing number of chemical agents for cancer control and, perhaps more important, a tremendous increase in the acceptance of cancer chemotherapy as a conventional tool of modern medicine. About 20 compounds including Methotrexate, 6-mercaptopurine, the alkylating agents, and adrenocortical hormones now are available for the treatment of patients with the leukemias and lymphomas. Alterations in hormone balance produce substantial benefits in the majority of men with advanced prostatic cancer and in about half of the women with disseminated carcinoma of the breast. Alkylating agents provide objective though temporary benefits in about 30% of women with advanced ovarian carcinoma as well as in patients with disseminated carcinoma of the lung. Promising results have been seen in the treatment of children with Wilm's tumor with the antibiotic, Actinomycin D,⁵ and striking effects have been seen in the chemotherapy of choriocarcinoma in the female.⁶ Choriocarcinoma is an extremely rare malignancy but this is the first time that any results which could possibly be considered as cures have been achieved by cancer chemotherapy and they offer great encouragement to all of us in the field.

These new methods of cancer treatment are important for several reasons. They benefit the patient, even though temporarily, relieving discomfort and pain and delaying dependence on the narcotics. They have concentrated useful attention on the

natural course of advanced cancer and so greatly increased knowledge about the disease. They give the patient and his family the assurance that everything possible is being done and that active hopeful treatment is being continued; this, incidently, is the medical profession's strongest defense against the cancer quack. Finally, by affording glimpses of even transient chemical control of cancer, they have added greatly to the optimism and enthusiasm with which this difficult search has been continued.

Cancer Chemotherapy

Recently, and partly as a result of these limited successes, there has been an enormous increase in research in the field of cancer chemotherapy. In 1954, the Cancer Chemotherapy National Service Center was established to coordinate laboratory and clinical investigation in this field and serve as a clearing house for information about new drugs. Some 50,000 agents are now being tested annually under this program and currently some 100 are undergoing various stages of clinical trial. Among the most intensively studied at the moment are 5-fluorouracil and related pyrimidine compounds.⁷ These compounds clearly produce objective regressions in cancers of the breast and of the large bowel, but whether or not the responses are consistent enough or of long enough duration to be of practical value has not yet been determined. In any case, it is certain that interest in this class of compound will continue for some time.

You are familiar, I am sure, with the work of Creech and his group⁸ at Tulane in treating certain types of cancer, particularly melanoma involving the extremities, by the perfusion technic. Using this method, they have been able to deliver high doses of chemical agents to areas of the body which can be isolated from the general circulation. More recently, at Memorial Sloan-Kettering, our investigators have been studying a slightly different method of regional chemotherapy. In the first series of patients, treated in conjunction with the Veteran's Administration Hospital, Methotrexate was infused into the carotid artery of patients with cancer of the head and neck. Simultaneously, the patients were given citrovorum factor to protect against

systemic effects of the drug. This infusion method permits the use of a much wider range of drugs than the perfusion technic, since perfusion can be used for a maximum of only two hours and most of the anticancer drugs of the antimetabolite class require several days to exert their effects. Like perfusion, the infusion technic is limited in its effectiveness to cancers which have spread only locally and which are dependent upon one blood supply, but a few very dramatic results have been seen.⁹ At present, a study is going on in Africa, where conventional methods of therapy are not available, to evaluate the usefulness of the infusion Methotrexate-citrovorum factor method in the treatment of advanced cancer of the uterus. Plans are being made to try different combinations of agents and different sites of cancer in patients in this country.

Epidemiology

Another field which I regard as of particular interest and promise in the field of cancer research is that of epidemiology. By comparing the relative incidence of cancer among various groups at various times, it is possible to obtain very strong clues to the environmental causes of many types of cancer. This type of detective work has led to identification and elimination of many industrial exposures to carcinogens and is now being extended to the analysis of broader environmental factors.

You are all familiar, I am sure, with the many statistical studies which have been done on lung cancer. It is clear from the abrupt rise in epidermoid carcinoma of the lung that it is under the influence of some changing factor or factors in the environment. There seems to be no reasonable doubt that cigarette smoking increases the risk of lung cancer development. Current studies are underway to determine the importance of other factors, particularly air pollution, on lung cancer development. Under the supervision of the Sloan-Kettering Division of Preventive Medicine, a study was completed in 1958 of lung cancer among Seventh Day Adventists living in Los Angeles.¹⁰ This group was selected because of its abstinence from smoking and its residence in a city which has a special air pol-

lution problem. Epidermoid carcinoma of the lung was 10 times less common among Seventh Day Adventists than among the general population, even among those Seventh Day Adventists living in the Los Angeles area. A companion study is now being set up in Venice, where smoking is prevalent but air pollution practically nonexistent.

Another form of cancer for which an environmental influence is suspected is carcinoma of the stomach. A recent study has confirmed previous indications that this type of cancer is on the decline in this country, and that it occurs more frequently in the lower socio-economic groups and in the northern part of the country.¹¹ Striking differences can be found between the incidence of stomach cancer in the United States and in Japan and Iceland, where the rates are extremely high. Retrospective studies of dietary habits and many other factors, such as food and water supply, of stomach cancer patients and control groups have been made in this country, Japan, and Iceland, and are now being processed for I.B.M. analysis.

A very extensive international study among breast cancer patients and controls has been recently completed among women in this country, Great Britain, India, and Japan.¹² The incidence of breast cancer is low in Japan, but in this country is extremely high and perhaps increasing. The results were interesting although not clear cut. No relationship has been found between breast cancer and some factors previously thought to play a role in its development; these include trauma, breast size, having been nursed by one's mother, and hormone therapy. Daughters and sisters of breast cancer patients seem to have an increased risk of developing the disease. The low incidence of breast cancer in Japan is not due solely to the long-term nursing as practiced by the Japanese woman but, as was previously suspected, to some more complex factor or combination of factors. The evidence suggests that ovarian function is somehow involved, since breast cancer is infrequent among women castrated at an early age, more frequent among single and infertile married women, and has a positive correlation to endometrial cancer and a neg-

ative correlation to ovarian cancer. Nursing may influence breast cancer by its depression of ovarian function. Despite the difficulty of sorting out the many inter-related data involved, it seems certain that the endocrine system plays a vital role in development of breast cancer.

Studies of experimental carcinogenesis are carried out in conjunction with the epidemiologic surveys. Ways are still being sought to reduce the carcinogen content of cigarettes, although there have not as yet been any practical results. In cooperation with a leading automobile manufacturer, gasoline engine exhaust is being analyzed. As part of a current study, on the relationship of penile hygiene and cancer of the cervix, the carcinogenic activity and elements in human smegma are under study.

It is my belief that as our knowledge and our tools improve, epidemiologic studies will unearth factors in the development of many different types of cancer and that, by elimination of these factors, substantial gains toward practical cancer prevention will be made in the years ahead.

The Cancer Viruses

The third area of cancer research which deserves mention concerns the cancer viruses. Virus cancer research began over half a century ago, but it has seen a remarkable resurgence of activity and progress in the last decade. A number of new oncogenic viruses have been discovered since 1950. One of the most interesting of the recently discovered viruses is that isolated by Stewart and Eddy¹³ of the National Cancer Institute. This agent, known as the polyoma virus, has been found to produce twenty-three different types of tumors when inoculated into newborn mice. Furthermore, it has been found to have the additional remarkable capacity of crossing strains and species barriers to induce sarcomas and other tumors in hamsters and rats.^{14, 15}

Successful vaccination now has been achieved against several of the tumor viruses. Burmester¹⁶ has prepared immune sera against the virus of visceral lymphomatosis. In 1957, Friend¹⁷ reported a vaccine against the Friend leukemia which can protect 85 to 90% of the animals challenged

with the virus, and in 1958, Stewart and Eddy¹⁸ succeeded in immunizing hamsters against polyoma virus.

For many years, there have been two main schools of thought on the nature of cancer. Some scientists have held to the mutation theory, arguing that cancer clearly represents a change in the hereditary nature of the cell. The other theory, long held abroad and gaining in popularity here, is that viruses are the cause of many if not all cancers. Cellular function and heredity is now believed to be governed by a particular chemical known as DNA and cellular mutations to be caused by changes in the DNA. When the polyoma virus is stripped of its protein coat, it has been shown recently, the chemical substance that remains is also a DNA. Finally, if this polyoma DNA is injected into laboratory animals, tumors result.¹⁹

There is no direct evidence of an interaction between the cellular DNA and the viral DNA but it is an interesting hypothesis and confirmation is being intensively sought. In any case, it seems clear that two mainstreams of cancer research are now joining and that these investigations are leading closer and closer to basic problems of the nature of growth and heredity as well as a deeper understanding of the cancer process.

Summary

In summary, the cancer problem is increasing in magnitude, largely as a result of medical progress in other areas. The outlook for the cancer patient has improved, and further advances may be expected as a result of progress in public and professional education and methods for cancer detection and treatment. Cancer research is moving at an accelerated pace, particularly in the fields of chemotherapy, epidemiology, and the cancer viruses, in which recent advances offer not only the hope for improved cancer treatment and prevention but also a deeper insight into the nature of the cancer process.

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Problems of the Part-Time Industrial Physician*

P. J. FLIPPIN, M.D., Decherd, Tenn.

In recent years, the trend toward industrialization of the South has resulted in a new type of service expected of the medical profession throughout the Southern states. Occupational health services must be provided for these new industrial installations. As members of the medical profession, we should have the vision to anticipate the problems associated with this type of service and meet these additional responsibilities before our shortcomings are brought to our attention by outsiders.

Many of us think of occupational health or industrial medical programs as primarily designed for sprawling plants that employ many thousands of workers. We tend to think of a huge steel mill, with all its varied activities, as a typical situation. True, there are many such plants in this country but, surprising as it may seem, they are in the minority as far as the percentage of the total working force employed is concerned. Magnuson¹ states that 99% of all firms under the old age and survivors insurance program of the Social Security Administration employ less than 500 workers, and that employees of small businesses represent approximately two-thirds of our labor force. Other writers place the figure as high as 80% of the total working population.

Consideration of these facts indicates that our concern should be directed to the area where the greatest problem lies—namely the small plant. For purposes of this discussion I have arbitrarily chosen to define a small plant as one that employs less than 500 people, although in many small towns and rural areas this is truly a large plant on the basis of the income it produces and the jobs it provides. Plants of this size do not justify the employment of a full-time physician as a rule. Thus, the majority of the working force of this country depend for the care of their occupational health problems on part-time industrial physicians, that is, individuals in active practice in the immediate area. A poll by the American Academy of General Practice some years

ago showed that 93% of its members have some responsibility for medical care in occupational cases. Obviously, then, the part-time occupational physician is the important factor in industrial health programs.

Many physicians who accept responsibility as medical advisors to small plants have never had any previous direct experience with occupational health. Frequently in the past this has been a loose association in which a local practicing physician cares for the accidents that occur in the plant and, other than this, has no idea of, or desire to know anything of the manufacturing process. Having been taught little in medical school of occupational health (12.8 hours is the average per school in 1960 according to Felton²), and busy with their own extensive practices, they look upon this activity primarily as a means of securing payment from insurance companies for the accident cases arising from this particular source. Fortunately, as more information becomes available and as the medical profession becomes more aware of the opportunities presented by these small plants, such attitudes have become less prevalent. There have always been some physicians who have recognized the opportunities in such associations with industry and who have contributed to beginning and maintaining plant health programs.

Obviously, then, these services must be furnished by physicians already in practice who have had no special training in occupational health or its ramifications. Physicians starting such associations with industry need to know of available sources of information concerning problems of organizing and directing plant health programs. Too often they find it difficult to secure such information, especially when they are located in small rural towns away from educational centers. Only occasionally does an article concerning occupational health appear in the usual medical journals they receive; and when it does, it is usually concerned with some case report or interesting

disease that has no connection with the particular problems encountered in the physician's daily industrial contacts.

No physician can be expected to be familiar with all the medical problems encountered in industry, but there are certain basic principles which apply to all occupational health departments. These should be available to all physicians who are furnishing professional service to industry. With this general knowledge as a background, the physician can then acquire more specialized knowledge of the medical problems of the particular industry with which he is concerned. It is these basic problems—such as plant survey, industrial hygiene, examinations before employment, job placement, psychologic counseling, relation of medical service to the safety program of the plant, familiarity with the Workmen's Compensation Law of his particular state—that concern all industrial physicians. The physician must also consider preventive measures, rather than to be concerned mainly with treatment. Treatment is necessary, but the ideal is to emphasize preventive medicine in the area concerned to avoid need for remedial treatment later.

Recently Shepard,³ in an excellent article, pointed out many sources of information in this specialized area. The article was published in the *Journal of Occupational Medicine*, which is probably unknown to many physicians doing part-time occupational health work. Thus this information, although published, is not conveniently available to that group who has the most need of it. Full-time industrial physicians would render a real service by not limiting their papers and case reports to specialty journals. Publication in journals that reach a more diverse audience, such as state and regional publications, is important.

Industrial Medicine and Surgery, in its December 1959 issue, has a list of books and journals in the field of occupational health. This includes the outstanding journals as well as books concerned with industrial medicine, hygiene, and toxicology. It is highly recommended as a source reference. Other sources of information are:

1. State Medical Society Committee on Industrial Health
2. Industrial Hygiene Department of State

Public Health Service

3. Council of Occupational Health of American Medical Association
4. Industrial Medical Association, 28 E. Jackson Blvd., Chicago 4, Ill.
5. Occupational Health Field Headquarters, U. S. Public Health Service, Cincinnati 2, Ohio.
6. Short Courses in Occupational Health offered by some medical schools and schools of public health.
7. Clinical meetings of Industrial Medical Association, A.M.A. Section on Industrial and Preventive Medicine and Public Health, Industrial Health Congress of the A.M.A. as well as meetings of regional medical societies, many of which have a section on industrial or occupational medicine.
8. Full-time industrial physicians who will be glad to offer their advice and in many cases time to help acquaint others with this field.

Recently there have appeared two new textbooks on occupational medicine, *Occupational Diseases and Industrial Medicine* by Johnstone and Miller and *Modern Occupational Medicine* (2nd Edition) by Fleming, D'Alonzo and Zapp. These books approach the field of occupational medicine from different viewpoints, and with both available the physician has a sound basis for a rather complete orientation in this health field.

Summary

It is pointed out that the majority of the working population of the country is employed in small plants which do not have the services of a full-time industrial physician. The practicing physicians who care for these people are frequently at a loss as to where to secure current information on occupational health problems. Sources where this information may be secured are pointed out.

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STAFF CONFERENCE

Saint Thomas Hospital*

Post-Myocardial Infarction Syndrome

DR. HERMAN J. KAPLAN: Today's patient with an unusual complication of myocardial infarction will be presented by Dr. Magtira.

DR. DANILO I. MAGTIRA: *Present Illness.* This 30 year old white man was hospitalized on Nov. 5, 1959, because of sudden, severe, squeezing substernal pain of one hour's duration. The history was remarkable in that he had had recurrent "indigestion" for a year and that his father and a paternal uncle had coronary artery insufficiency.

Physical Examination. The physical findings, aside from marked apprehension, were within normal limits. The B.P. was 124/70, the P., 68, and the T., 98° F.

Laboratory Findings. The WBC. count was 11,100 per cu. mm., the Hgb., 13.4 Gm., the serum glutamic oxaloacetic transaminase, 106 units, the cholesterol, 332 mg. per 100 ml., the fasting blood sugar 105 mg. per 100 ml. The urinalysis was normal. The EKG. revealed an acute myocardial infarction of the posterior wall.

Course in Hospital. The patient was given oxygen, meperidine hydrochloride (Demerol), phenobarbital and aluminum hydroxide. Anticoagulants were not used because of symptoms suggestive of peptic ulcer.

On the second day a loud, transient pericardial friction rub was heard. A portable chest x-ray study was within normal limits. After a maximum temperature rise to 101.4° F. on the second day, the fever gradually defervesced, and he became afebrile on the 6th day. Up to this time he had mild recurrent anterior pleuritic chest pain, radiating to either shoulder, and a non-productive cough.

On the 12th day he again developed severe substernal pain, sweating and hypotension. The EKG. revealed an evolving myocardial infarction of the posterior wall with anterolateral extension. The WBC. cell count was 9,300 per cu. mm. He was now started on bishydroxycoumarin (Dicumarol).

For 3 days he had a low grade fever and mild pleuritic chest pain, but his course remained unremarkable until the 25th day (13 days following extension of the infarct). A rise in temperature up to 101.4° F. ensued, and he experienced severe anterior pleuritic chest pain radiating to both shoulders. The pain was intensified on swallowing and changing position. At no time was there any evidence of peripheral thrombophlebitis. He had tachycardia, distant heart sounds and moist

rales at the lung bases. There was no paradoxical pulse or distention of neck veins. Electrocardiograms revealed only the evolutionary changes of the myocardial infarction. Chest x-ray films showed enlargement of the cardiac silhouette and minimal pleural effusion on the left. The prothrombin time was 74% (15 seconds). The Hgb. was 10 Gm., PCV., 31 volumes, serum glutamic oxaloacetic transaminase, 36 units, and the stool was negative for blood. Febrile agglutinins showed no elevation in titer. Cultures of the urine and blood were sterile. By the 29th day there was no improvement, in spite of salicylates, narcotics, digitalis and chloramphenicol. The bishydroxycoumarin (Dicumarol) was stopped and prednisone was started (40 mg. per day). Overnight he became free of symptoms. The chest film revealed a gradual reduction in heart size. Prednisone was gradually decreased in dosage and discontinued in about 2 weeks. He was discharged on the 37th hospital day.

Early in January of 1960, two months after his myocardial infarct, he again developed similar symptoms which again responded to short term prednisone therapy.

DR. KAPLAN: I want to emphasize the following essential points in today's discussion:

The patient developed severe pleuropericardial pain and fever 12 days after the extension of his myocardial infarction. There was marked enlargement of the cardiac silhouette—a finding consistent with that of pericardial effusion. There was no evidence of peripheral thrombophlebitis. No electrocardiographic or laboratory evidence for extension of the myocardial infarction was found. The prothrombin time was not significantly prolonged; a marked drop in the hemoglobin occurred. Bacteriologic studies were negative, and there was no favorable response to the administration of antibiotics. He responded promptly to prednisone, recovered, had recurrence of symptoms, again responded to prednisone, recovered and resumed work.

This patient's course beautifully depicts the post-myocardial infarction syndrome. Dressler¹ called attention to this entity in 1956. In January 1959, he reported 53 cases. The syndrome consists of pericarditis, pleurisy and pneumonia occurring singly or in any combination, some time in the post-infarction period. It resembles idiopathic pericarditis and the post-cardiotomy syndrome. Dressler reports an incidence of 3 to 4% in those having had acute myocardial infarction.

*From the Department of Medicine, Saint Thomas Hospital, Nashville, Tenn.

Pericarditis in acute myocardial infarction is a relatively insignificant event. In the post-myocardial infarction syndrome, on the other hand, it is a major and impressive complication and the most common manifestation of the triad (78% in Dressler's experience). It has certain characteristic features. The pericardial friction rub is heard usually in the second to eleventh week of illness and may last from 3 days to 11 weeks. It occurs more frequently in this syndrome than in acute myocardial infarction, where it is heard on the second to fourth day. There is frequently a pericardial effusion (62%), which is serous or hemorrhagic. It has no relationship to anticoagulant therapy, but anticoagulants are contraindicated. Serial x-ray studies are of greatest importance in making the diagnosis. The electrocardiogram shows evidence of pericarditis in about one-half of the cases.

Pleurisy with effusion is also common in this complication (68%). It may be unilateral or bilateral, serous or hemorrhagic. It occurs in the absence of congestive heart failure or pulmonary infarction.

Pneumonia is less frequent than pericarditis or pleurisy (28%). The pulmonary infiltrates are mostly at the bases; there may be hemoptysis. Bacteriologic studies are nonrevealing and antibiotics do not help. The pathologic findings are nonspecific. Weiser and associates² reported a patient with post-myocardial infarction syndrome who had substernal pain, a pericardial friction rub, profuse persistent hemoptysis and progressive massive consolidation of both lungs. The clinical diagnosis was that of pulmonary infarction, and he was not given anticoagulants. The patient died and autopsy was done. The findings revealed fibrinous adhesions between the visceral and parietal pericardium (this was 4 days after the friction rub was heard). In the lungs, the "microscopic picture resembled that seen in atypical viral pneumonia." There was an alveolar hyaline membrane, fibrinoid necrosis of the alveolar walls and an accumulation of mononuclear exudate in the alveoli. There were no pulmonary emboli and no source for them was demonstrable.

Clinically the most impressive symptom

of the complicating pleuropericarditis is pain, which often precedes the onset of fever. The pain has a variety of characteristics. It may resemble that of myocardial or pulmonary infarction. It has been described as pressing, squeezing, tightening, sharp, stabbing, radiating to the shoulders, neck, jaws, and epigastrium. It is worse on breathing, yawning and swallowing.

The laboratory data usually reveal a white blood cell count between 10,000 and 20,000 per cubic millimeter. The serum transaminase is often normal. Bacteriologic studies are negative. There may be anemia.

The course is frequently one of recurrence, symptoms usually lasting one to two weeks. It is self-limited. In the milder forms salicylates and narcotics suffice. In the severe cases steroids are almost specific, bringing about almost miraculous improvement. The tendency to recurrence is greater when steroids are used. Anticoagulants are contraindicated.

The etiology is unknown and it is related to neither the size nor site of the infarct. Dressler postulates a hypersensitivity reaction to antibodies as a result of trauma of the infarct.

DR. T. C. HAHN: Are there any comments?

DR. WILLIAM F. SHERIDAN: I recently saw a patient in the post-infarction period with symptoms similar to those of the patient presented today. This complication of myocardial infarction may not be so rare.

DR. FREDERIC E. COWDEN: How can one distinguish the post-myocardial infarction syndrome from pulmonary infarction?

DR. KAPLAN: It may be very difficult. Evidence of pericarditis, in the presence of pneumonia or pleurisy, would be most helpful.

DR. LAURENCE A. GROSSMAN: The patient's response to steroids may be of great help in distinguishing between the post-myocardial infarction syndrome and pulmonary infarction.

DR. HAHN: I regret that our time limit prevents further discussion. However, let me summarize the important points to remember in considering the post-myocardial

infarction syndrome, as brought out in today's discussion.

1. It should not be confused with pulmonary infarction or extension of the myocardial infarction.

2. Anticoagulants are dangerous and contraindicated.

3. In general, the post-myocardial infarc-

tion syndrome is a benign process and carries an excellent prognosis.

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2. Weiser, Nelson J., Kantor, Wilton, and Russell, Hollis K.: Postmyocardial Infarction Syndrome, Circulation 20:371, 1959.

Pheochromocytoma. Diefendorf, R. O., O'Donnell, A., and Creeman, E. W. Arch. Surg. 81:679, 1960. Pheochromocytoma, once considered rare, is being reported with increasing frequency. The fact that, annually, 800 people die in the United States from this disease and all could be saved is the stimulus for discussing this entity. A typical case (history, symptoms, and laboratory data) with surgical management and postoperative care is reported. The discussion includes: (1) locations of tumors; (2) pathology; (3) pathological physiology; (4) diagnosis; (5) surgical management, stressing control of hypertension and hypotension; and (6) proper anesthesia. The following conclusions are reached: (1) Pheochromocytoma is more common than was originally thought. (2) As a curable disease, failure to diagnose represents great tragedy. (3) When this tumor is present and unrecognized, operation for unrelated conditions frequently proves disastrous.

Respiratory Depression with Intraperitoneal Neomycin. Mann, L. S., and Levin, M. J. Arch. Surg. 81:690, 1960. Twenty-eight adult male patients, each of whom received 2 Gm. of neomycin intraperitoneally during surgery, were compared with 25 controls. Both groups had similar anesthetic management. Fifteen of the neomycin-treated patients showed varying degrees of respiratory depression, as compared to 3 of the controls. Three of the neomycin-treated group exhibited total apnea for periods up to more than 10 hours. Six others experienced severe respiratory depression without apnea, and the remaining 6 showed mild depression of respiration. Of the controls, 2 had minimal and 1 had moderate depression. Dosage has now been reduced to 1 Gm. of 1 per cent solution. A continuing study to determine the effects of the reduced dosage is under way. To date we have observed no depression in adults receiving this dosage.

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CLINICOPATHOLOGIC CONFERENCE

Methodist Hospital

Histoplasmosis*

A 70 year old white retired man was admitted to the hospital with the complaints of chills and fever of 3 weeks duration.

He stated that about 5 weeks before admission, he had noticed enlarged cervical lymph nodes. Then he began to have intermittent chills which would be followed by temperature elevations to 101-102° F. There was some vague pain in the upper chest. He had not had a "cold" and there was no history of cough. Before admission he had received "sixteen mycin capsules and one shot of penicillin" with no effect. His physician had advised lymphnode biopsy, and this had been refused by the patient. Inquiry into his past history revealed an illness thought to be myocardial infarction at the age of 67. He had at one time been "a very heavy drinker." Six months before the onset of his presenting complaints, he had married.

Physical findings included a T. of 101°F., with P. of 90, R. of 24, and B.P. was 134/74. He was rather obese. There was slight hyperemia of the pharynx. Many large lymphnodes were palpable on both sides of the neck, in the axillas, and in the inguinal regions. The heart and lungs were normal. The liver and spleen were both described as "enlarged"; no other abdominal organs or masses were felt.

A scout film of the abdomen showed "a vague density (which) overlies the right upper quadrant and epigastrium," having the appearance of a mass in this area. There were no other abnormalities. Posterior-anterior and right lateral views of the chest were described: "The right costophrenic angle appears blunted. Generalized fine reticulated densities are noted throughout both lung fields. These radiate from both hili peripherally into the lateral third and appear to be within the lung parenchyma. This could be on a congestive basis; however, the possibility of lymphangitic metastases cannot be ruled out."

Admission urine showed 12-14 WBC. per high power field, but was otherwise normal. PCV. was 48.5% with Hgb. of 16 Gm. Total leukocytes were 9,800 with 41% segmented neutrophils, 38% lymphocytes, 12% eosinophils, and 9% monocytes. All agglutinations were negative and a blood culture showed no growth.

Initial treatment included x-ray therapy, to which there was no response. His temperature ranged between 99 and 102.8° F., with elevations most pronounced at night. On the 8th hospital day he was given 10 mg. of nitrogen mustard (Mustargen) intravenously; 3 days later this was

repeated. Subsequently, the cervical lymphnodes were not palpable, and the other nodes became smaller. The liver was still enlarged and fever persisted. A portable chest film showed "... advancement of the diffuse reticular process. This almost assumes a miliary type pattern. Pulmonary tuberculosis as well as numerous other entities must be considered. No gross evidence of pleural fluid." The PCV. was now 43% and total leukocytes 7,500. An N.P.N. was 52.5 mg./100 ml. It was still felt that the primary disease was one of the lymphomas with pulmonary and hepatic involvement; because of the possibility of superimposed infection, he was given antibiotics.

By the 14th hospital day he appeared to be failing rapidly. There were temperature elevations to nearly 104°F. He had become icteric; total serum bilirubin was 4.3 mg. with a direct of 2.4 mg./100 ml. Cephalin cholesterol flocculation was 3 plus in twenty-four hours and 4 plus in forty-eight hours.

During the last 36 hours of life, there was progressive hypotension. He continued to have chills and fever. He remained rational and coherent until respiration suddenly ceased on the 15th hospital day.

DR. C. HAROLD STEFFEE: I hope that you have had a chance to read the clinical history and physical findings on the patient. We will not read them for you. To open the discussion this evening I should like to present Dr. Charles McCall, who is our consultant in pulmonary physiology. Dr. McCall.

DR. McCALL: First, I would like to congratulate Dr. Steffee for doing such a thorough job of avoiding being helpful to the clinician. I confess that even the best maneuvers acquired in my residency training have really let me down. One such maneuver is to go to the library to find out what journals the pathologist has checked out. The reason for this failing becomes apparent only now as I see that the journals Dr. Steffee has with him come from his personal library. He has also employed another technique of pathologists calculated to mislead us. He focused the projector by using a slide of a blood smear, which he quickly turned off on noticing that I was also focusing upon it. Now, I am sure that this slide had nothing to do with the patient we shall soon discuss, but this is of relatively minor importance anyway, as I have no idea what this slide was.

In essence the problem for our consideration is that of a 70 year old white man who had an acute febrile illness of seven weeks

*From the Departments of Pathology and Internal Medicine, Methodist Hospital, Memphis, Tenn.

total duration from onset to death. His illness began with the noticing of enlarged cervical nodes. This was followed in 2 weeks by the onset of chills and fever which persisted over the next 5 weeks. Associated with the chills and fever were some vague upper chest pains. He was admitted to the hospital after 5 weeks of illness, and we are told that on physical examination there were large bilateral cervical nodes, axillary nodes, and inguinal nodes. Although in general, it serves little purpose to complain about things we are not told, the adenopathy certainly is one of the key points in this case. Therefore, I must point out the desirability of knowing a little more about the exact size, exact location, consistency, and whether or not these nodes were single, discrete, symmetrical, or asymmetrical. Without this information we cannot give an intelligent differential diagnostic discussion of the adenopathy. A positive statement is made that the nodes were enlarged and that the heart and lungs were normal, but then we read that the liver and spleen were "both described as enlarged." I will for the moment let that pass, but there may be some significance to this wording. Before looking at the x-rays let's consider the other laboratory work and note that there was no anemia, the white count was normal and the differential showed a slight increase in monocytes and 12% eosinophils—findings which may be helpful. May we look at the x-rays now please, Dr. Mitchum?

DR. MITCHUM: Dr. Petty will go over them.

DR. PETTY: These were the first films that were made on the 21st of December. We have a plain film of the abdomen; PA and lateral films of the chest. The film of the abdomen shows a homogenous shadow high in the epigastrium which appears to displace the transverse colon down somewhat. There is a normal gas pattern in the colon. There is some fecal stasis present. The abdomen in general is devoid of small bowel gas, and there is a noticeable lack of stomach bubble. The liver itself is down to the iliac crest and lacks some of the sharp definition that you see in normal liver shadows. It is somewhat blunted, which would indicate that there is some engorgement. The splenic shadow I cannot make out. The

bony structures in general show slight hypertrophic changes which are compatible with the patient's age. Looking over these films, in retrospect, there is a lytic defect in the end of the rib here which may be more apparent than real, and if it is real, I can't ascertain from this single study whether it is inflammatory or neoplastic. Moving to the chest, we see the chest of a mildly emphysematous patient; the diaphragmatic leaves are somewhat flattened. There is some blunting of one costophrenic angle indicating that there is probably some fluid present. The fissures are accentuated a little bit more than normal which might also indicate some fluid. The heart itself appears essentially within normal limits. When we look at the lung fields we see a very finely reticulated pattern throughout both lungs; evenly distributed. It has the appearance of following perivascular and lymphatic channels. At the time the film was first seen in the department, the diagnosis of lymphangitic metastatic carcinoma was considered; however, very early congestive failure could not be excluded. We saw the patient only one other time, seven days later; at which time, the patient was too ill to come to the x-ray department and a portable film was made. A rather good portable film with the exception that the left diaphragmatic leaf in the lower corner is excluded. The lung fields in which we are most interested shows a progression of the diffuse pattern. It does take on a very spotty characteristic which is somewhat suggestive of miliary distribution; however, on close inspection it gives one an idea that there is either alveolar fullness, or maybe again progression of lymphatic engorgement. There are numerous entities that this could represent—a form of congestion—lymphangitic metastatic carcinoma—fulminating pulmonary fibrosis of the Hamman-Rich variety—histoplasmosis—tuberculosis, etc.

DR. McCALL: Thank you very much. This narrows it down considerably! It is important for us to note not only the bilateral diffuse reticular pulmonary infiltrate, but also the rapid rate of its progress. Possibly the reason for the wording "described as enlarged" may mean that the spleen was not enlarged at all. The films do not con-

firm splenomegaly, but this does not rule it out, of course. If the x-ray mass in the right upper quadrant is not all liver, and it does not appear to be, it could be in part, mesenteric lymph nodes. To proceed then with the patient's course, we are told that he was first given x-ray therapy, but we are not told what kind of x-ray, how much, or over what period of time it was given. It is simply stated that there was no response to x-ray. He was subsequently given 10 mgs. of nitrogen mustard on two occasions. Although we are not told the patient's weight, it was stated that he was obese. Therefore, I think it would be safe to conclude that he received only approximately half the usual dose of nitrogen mustard. We are told that after the nitrogen mustard, the cervical nodes became impalpable—that is, could no longer be felt, and that there was a decrease in the size of the other peripheral nodes. However, concomitant with this response of peripheral nodes, as we have already been shown, the pulmonary infiltrate progressed, the chills and fever continued, the liver remained enlarged and ultimately jaundice developed. The only information that we have about the jaundice is that the total bilirubin was 4.3 with a direct of 2.4 mg. %, and that the cephalin flocculation was 4 plus. After a seven weeks course we are told that the patient remained responsive but became hypotensive, continued to have chills and fever, and then was noted to cease respiring on the 15th hospital day.

In summary, we are dealing with an elderly man with a febrile illness, adenopathy, hepatomegaly, and pulmonary infiltration. Before discussing the lung infiltrate, let's stop to reemphasize that although the adenopathy and its response to nitrogen mustard are key points, we are not given enough detail to allow a fruitful discussion of either generalized or local cervical adenopathy. The number of diseases causing chills, fever and adenopathy is legion. However, consideration of the pulmonary infiltration, its character and course may allow us to narrow the list somewhat. We are told on the protocol that on physical examination the lungs were normal. This fact plus the findings on x-ray of a diffuse reticular lung infiltrate means that this is an *interstitial* process. This is of considerable help

and I believe that we can with profit, go down at least a partial list of disorders associated with chills, fever, adenopathy, and interstitial pulmonary infiltration. We can narrow this list even further if we give consideration to the patient's course. This was not an insidious development of an interstitial infiltrate and it would have to be classified either as acute or subacute. This, plus the lack of history of exposure, rules out pneumoconiosis. I think we can also eliminate, by the rate of progression, sarcoidosis. In addition, there is no hilar adenopathy. The collagen diseases, particularly polyarteritis, lupus, scleroderma, can have interstitial pulmonary infiltrates as part of the picture. Although the rapid rate of progression does not rule out collagen disease, the total picture does not strongly suggest them. The rapid progression of a generalized symmetric adenopathy is against lymphangitic carcinoma from such a primary site as the stomach or pancreas. Now let's consider infectious agents. Virus diseases deserve mention only for completeness. Tuberculosis and fungus diseases must be given strong consideration and will require holding in the front to come back to later. Idiopathic pulmonary fibrosis certainly can give this type of pulmonary involvement but would not explain the total picture. Lymphoma also must be strongly considered.

To proceed in our attempt to solve this problem remember that this patient was given nitrogen mustard, and then we are told that these large nodes (we don't know how large they were, but must accept by faith that they were indeed large) after nitrogen mustard could no longer be felt. This is another key point. For all practical purposes this type response, which we would accept at face value as fact, means lymphoma.

I should like to digress momentarily to call your attention to a bit of past history, about which we have not as yet talked, because of the difficulty I have had in trying to figure out exactly why Dr. Steffee put it in the protocol. I know it's a key but it's difficult to fit into the lock. We are told six months before the onset of his presenting complaint he had married. Remember that this man was 70 years of age. I first

thought that possibly with multiple adenopathy and history of recent marriage that Dr. Steffee wanted us to think of cat scratch fever. Further thought, however, decided me against this diagnosis. Maybe he was trying to tell me that this man was physiologically younger than 70 years. This might prove helpful in the light of our diagnosis of lymphoma, because of the lymphoma group, I think we can best fit this picture into Hodgkin's disease, which usually occurs in a younger age group.

Should you desire to subdivide Hodgkin's disease—and there is considerable reason not to do this—I think Hodgkin's sarcoma is most likely. This man had a rather acute onset and early in his course he had prominent constitutional symptoms with chills and fever. This is characteristic of Hodgkin's disease, as opposed to lymphosarcoma. His age of 70, even if we don't make him physiologically younger, goes along with Hodgkin's sarcoma. The rapid progression of this illness terminating in death also fit this disorder as does the early radio-resistance. Our reservation about splenomegaly in this man does not influence us greatly either way as in a large percentage of patients with Hodgkin's disease the spleen is not palpable and in a like number it is enlarged. Possibly we shall find that the spleen was not very enlarged, but it will have no great bearing on our diagnosis. Hodgkin's disease alone could explain the adenopathy, chills and fever, jaundice, hepatomegaly, and the pulmonary infiltration as we see it on the static film. We know that lymphoma and Hodgkin's disease can cause interstitial pulmonary infiltration. However, I do not believe it is the explanation of the lung involvement in this mass for the following reasons. This man, though given only a partial course of nitrogen mustard, got a rather dramatic response in terms of the peripheral nodes. However, concomitantly the pulmonary infiltration increased, his chills and fever continued, the liver remained enlarged, and he continued to worsen and died. It is hard for me to understand why that these particular nodes responded dramatically while all the other process continued if this is a Hodgkin's disease alone. Secondly, not only did the lung infiltrate progress, but it did so at too rapid

a rate for lymphoma. This causes us to return to our consideration of tuberculosis and histoplasmosis.

Having made the diagnosis of Hodgkin's disease and being aware of increased incidence of tuberculosis in patients with Hodgkin's disease and not knowing of any such association with histoplasmosis, I shall give most consideration to miliary tuberculosis. However, we should not lose sight of the fact that tuberculosis nodes do not respond to nitrogen mustard and even when they respond to any tuberculosis therapy they respond more slowly than that recorded in this patient.

Therefore, although I have tried hard to avoid not only the making of two diagnoses, but especially two major diagnoses, I am unable to reconcile the node response and the lung disease without concluding that he had Hodgkin's disease complicated by miliary tuberculosis to explain the rapid progression of his pulmonary infiltration and its lack of response to nitrogen mustard.

We are not given enough information about the terminal episode to discuss it with any finality. He had a history that suggested a previous myocardial infarction to those taking care of him. He could have had a second myocardial infarction. Pulmonary embolus should be mentioned, not because there is anything to suggest it clinically but because he is an elderly man who was bedfast. Septicemia and liver insufficiency are other possibilities.

In summary, I think that this man's primary diagnosis was Hodgkin's disease treated with nitrogen mustard and complicated terminally by miliary tuberculosis. Although there was x-ray evidence that the lung infiltrate was present before nitrogen mustard was given (without a proven diagnosis) we should remember that nitrogen mustard is not an innocuous agent. Among its many potent effects is that of an acute inflammatory reaction that can fan the flame when tuberculosis is present and play a significant role in its dissemination.

This leads me to one of the main points I would like to make. Although such laboratory aids as bone marrow cultures and skin tests would have been desirable, a node biopsy was mandatory before treatment. It is our responsibility as physicians to make

the patient accept and even desire a node biopsy. The burden rests squarely on our shoulders as physicians, not on the shoulders of the patient.

DR. STEFFEE: Thank you Dr. McCall; that was very well done. I would like to call for other discussion from the floor. Dr. Horton.

DR. GLENN HORTON: Dr. Sarah McDearman is here from Kennedy. She has been nationally recognized as an authority on histoplasmosis and this case right here could very well fit in with histoplasmosis. We have the pulmonary infiltrate, adenopathy and hepatomegaly. Could Dr. McDearman comment on this?

DR. STEFFEE: May I parry that request, Dr. Horton? I asked Dr. McDearman to come here myself this evening. I would like to keep you dangling a little bit longer as to whether I did this to mislead you or otherwise.

DR. McCALL: Certainly histoplasmosis, as we know, cannot be differentiated from tuberculosis clinically with any degree of certainty. But histoplasmosis alone would not explain the response of the nodes to nitrogen mustard and I do not believe that we can discount this fact. Histoplasmosis, like tuberculosis, could explain everything else in of itself and could have been associated with Hodgkin's disease in the same sense that I have associated tuberculosis. The reason I singled out tuberculosis as opposed to histoplasmosis is because there is the recognized increased association of these two diseases.

DR. STEFFEE: Can we have some other discussion from the floor? Dr. King do you want to say anything about the treatment or do you have the data at your fingertips?

DR. KING: The patient came to us with a clinical diagnosis only of lymphoma. He had a Pel-Ebstein type of fever. He refused biopsy of nodes in neck, axilla or groin areas; he had a large liver and spleen. Treatment consisted of small fields with dosage of 150 r(air) daily from December 22 through 28, 1959. These were to each groin area; and to the right cervical region.

DR. STEFFEE: Any other discussion? I think that Dr. McCall did very well with this discussion. The clinical impression at the time of death was that this was a

lymphoma. Dr. McCall has added tuberculosis to this. This is more than the gross autopsy did. The gross autopsy findings were regarded as a typical lymphoma. Nobody was very excited and we have the microscopic sections back, so let us take a look at these sections. The first section is a section of liver. This is a relatively low power photomicrograph. This is a plugged bile canaliculus here. There is another little one here. We see an inflammatory infiltrate which is not very specific, but has a slight resemblance to a granuloma. Let us look at the next portion of liver and here again is a more or less nonspecific inflammatory infiltrate except that there is a little dot here that makes one wonder a little bit. The pathologist often spends hours looking at these dots in node biopsies. He strains his eyes and looks harder and gets special stains and everything stains with a special stain-nuclear fragments and all that sort of thing and so he says, "I don't know." The next one is spleen but this doesn't look like normal spleen. For one thing, there is relatively little blood in it. It is a pretty inflammatory spleen. These aren't extremely well defined granulomata, not typical tubercles or anything of the sort, but the whole thing has more mononuclear cells and so on than you would expect. Now let us look at the next one which is a high power of the spleen and now the cat is out of the bag. There's a cell loaded with Histoplasma. There's another one. There's another one. And this is in the routine section and all the hours we spend with special stains must be a waste of time. Let's look for some more now. I think next is a lymph node. Against a granulomatous sort of reaction—not well defined like a tubercle but rather poorly defined. Next is a higher power of a lymph node (Fig. 1). Here is an area with some little dots in it. These are Histoplasma. There are more here. The next one is a Gomori-methenamine silver technique which I believe stains the capsule as well as the organism itself, and therefore, it stands out better because the capsule surrounds it and it looks like a bigger black dot (Fig. 2). Next is a lung and here is a little granuloma of a sort. Here is a macrophage full of Histoplasma. Another one over here. The next one is a branch of a pulmonary ar-

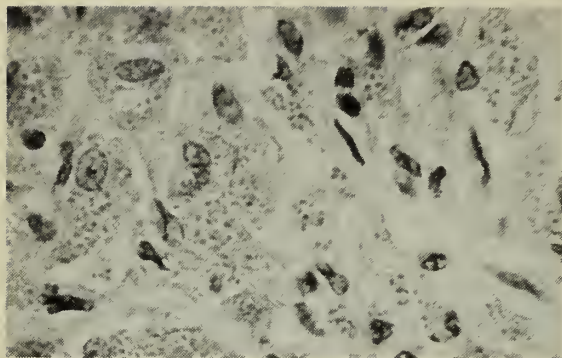


FIG. 1. Lymphnode with intracellular *Histoplasma*, H & E (x735)

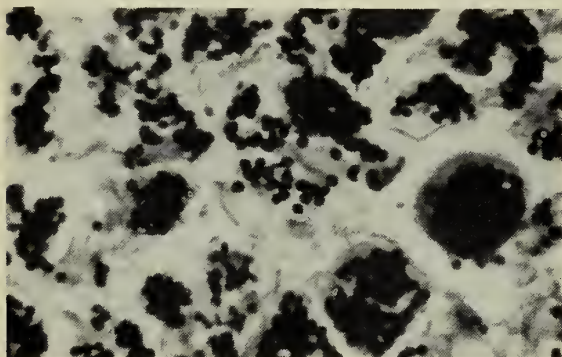


FIG. 2. Lymphnode, *Histoplasmosis*. Gomori-methenamine-silver (x735)

tery and here projecting into the lumen of this vessel is the granulomatous lesion in which there are a few organisms. This kind of inflammatory lesion will explain why it is reported that roughly 25% of the patients with histoplasmosis may have positive blood cultures. Certainly this kind of a lesion can readily discharge these organisms into the circulating blood and give one a chance at obtaining a positive culture from peripheral blood. The last photomicrograph is another lung section. I think that the primary cause of death was diffuse pulmonary hemorrhage.

I specifically asked Dr. McDearman to come here tonight to discuss the serological diagnosis of histoplasmosis. I am sure that you all know that she is chief of the serology laboratory at Kennedy and at least the Tennessee expert on this disease. I won't embarrass her by calling her the national expert. Dr. McDearman—

DR. MCDEARMAN.* I feel like a preacher delivering the same sermon to a different congregation because I would like to pre-

sent to you tonight some of the same material I have just gotten together for another meeting. My subject, as you already know, is fungus serology. The case that has been discussed tonight emphasizes strongly, but sadly, by main theme for this discussion: Serologic tests are valuable in both the diagnosis and prognosis of histoplasmosis. In histoplasmosis the relative concentration and persistence of humoral antibodies is correlated with the type of lesion and extent of tissue involvement. It is possible to determine and follow the activity of disease with serologic tests employing *Histoplasma capsulatum* antigens.

The first slide (Table 1) shows some gen-

Table 1

	Number of Patients
Histoplasmosis, culturally proven	86
With cavities	70
+ Extrapulmonary	9
+ TB	7
Surgery	11
Skin-test negative	3
Lab Exams:	No.
Sera test	1505
Cultures—Sputa	1838
Others	307
Histochemical	83/42 Patients

eral statistics that should interest you because of your residence and medical practice in Memphis. Eighty-six patients with culturally proven histoplasmosis have been accumulated over the past nine years. Some have been followed for as long as eight years. Seventy-five of the patients were our own (VA Medical Teaching Group Hospital, Kennedy), the others from local Memphis hospitals.

Note that cavitary disease predominated—70 or 81% of the 86 cases. We recognized the importance of classifying these patients into groups with disease due to primary infection, reinfection and endogenous spread. We felt, however, that even with what we considered extensive data, such a classification could not be made.

Only one patient was seronegative. This indicates the high sensitivity of the antigens and serologic tests employed. The number of laboratory examinations is shown to emphasize the intensive serologic, cultural, and histologic follow-up that is routine in our hospital and that we believe is important for a careful study of patients

*Sarah McDearman, Ph.D., Serologist, VA Medical Teaching Group Hospital, Kennedy, Memphis, Tennessee.

with histoplasmosis. In 12 of our patients repeated sputa were negative and positive cultures were obtained only from various tissues: resected lung, scalene or other nodes, marrow, blood, and intestines. Special stains are used for histologic examinations.

Some people seemed to be confused with the number of different serologic tests that we use routinely in our laboratory. These tests are shown in the next slide (Table 2).

Table 2

1. CF Test	Histo Yeast Antigen
2. CF Test	Histo Mycelial Antigen (Histoplasmin)
3. Collodion Agg. Test	"
4. Hemagglutination Test	"
5. CF Test	Blasto Yeast Antigen

The first is a CF test with the yeast antigen. This test follows closely with titer increases or decreases, the activity of the disease. It usually becomes positive earlier than does the CF test with the mycelial antigen. It remains positive long after sputum conversion and even after clinical symptoms have disappeared. The second test is the CF with the mycelial antigen, Histoplasmin. This test tends to parallel sputum cultures—positive when sputa are positive, decreasing in titer as the sputum converts, and negative if sputa cultures are negative. Histoplasmin is also used in the collodion and hemagglutination tests (Tests 3 and 4). These two tests are similar in reactivity. They are sometimes the first tests to become positive and frequently remain positive the longest. Also, they are sometimes the *only*

positive tests. We are now using a special preparation of Histoplasmin in the hemagglutination test. It is more sensitive than the regular Histoplasmin in this test.

With all of these serologic tests the higher titers are obtained during the acute episodes when extensive infiltrates—with or without cavities—are present. Cross reactions with *Blastomyces dermatitidis* antigen also occur most frequently during the active stages, and several or all of the different tests are positive. With less lung area involved and less disease activity, titers are lower. Within minimal lesions, titers are lowest. An increase in titer indicates disease spread, and a decrease in titer, improvement. In chronic cavitory cases the titer decrease with improvement is slow and gradual. In acute disease, without cavities, titers rise quickly, are transitory, and decrease to negative comparatively quickly. We have found no serologic changes following amphotericin-B except the usual titer decreases that occurred with sputum conversion and regression of disease. An example of these changes is seen in the next slide (Table 3).

Eleven of the 86 patients underwent thoracic surgery. When all of the diseased tissue is removed—a single, small well circumscribed lesion—serologic tests revert quickly to negative. It is interesting that 7 of the 11 with surgery had negative sputa—organisms were isolated only from the resected lung tissue.

Seven of the 86 patients had histoplas-

Table 3

SEROLOGIC TESTS IN PATIENT WITH EXTENSIVE BILATERAL CAVITARY HISTOPLASMO-SIS

Remarks	Serum Date	Serologic Tests*				
		HY-CF	HM-CF	CA	HA	B-CF
Patient S.M. W.M. '93. Arkansas. 1950, 1952: Bilateral pulmonary fibrosis, nodular infiltrate. Mar. 1955: Multiple cavities bilateral, improved, discharged. Oct. 1956: Readmission, disease spread, first pos. sputum. Feb. 1957: improved. Aug. 1957: readmission, disease spread, all sputa positive. Amphotericin-B: Mar. to July, 1958; Dec. 1958 to Mar. 1959; Nov. 1959 to Apr. 1960, June 1960. Mar. 1958 to Oct. 1960: scattered positive sputa. June 1960: clinical and x-ray improvement. Dec. 1960: Histoplasmosis probably active but less so.	10/56	—	—	8		
	11/56	64	8	32		
	1/57	128	16	8	64	
	5/57	—	—	32	64	16
	8/57	64	32	16	64	32
	1/58	256	64	16	128	16
	6/58	64	16	8	64	16
	12/58	32	32	8	128	—
	10/59	64	32	16	64	—
	1/60	16	16	8	128	—
	3/60	—	8	—	64	—
	4/60	16	8	—	64	—
	6/60	64	32	16	64	—
	9/60	64	64	8	128	8
	12/60	8	16	8	128	—
*HY-CF—CF test with yeast antigen						
HM-CF—CF test with mycelial antigen						
CA —Collodion agglutination test						
HA —Hemagglutination test						
B-CF —CF test with <i>B. dermatitidis</i> antigen						

mosis and tuberculosis, both diseases culturally proven. We have no definitive answer for you concerning the effect of either disease on the other. Certainly some of them have minimal disease due to histoplasmosis. Some are well from both diseases. Two of the 7 had extrapulmonary histoplasmosis.

There were 9 patients in this series with extrapulmonary histoplasmosis. With these patients, one finding interests me. High titers are obtained if there is also extensive lung involvement. When lung disease is minimal or inactive, serologic titers are low. I draw no conclusions at this time.

In summary—

1. Serologic titers are correlated with disease activity. They are helpful in diagnosis and prognosis.

2. It is important to have repeated serologic tests. A battery of different serologic tests with different antigens gives the most information.

3. A "significant" titer cannot be given—it is the changing titer that is important.

4. Repeated, and repeated efforts must be made to isolate the organism and sputum alone is not sufficient.

5. Be a sport—don't dig for fishing worms. The tree limb under which you are digging may be the chicken roost.

DR. STEFFEE: Thank you very much Dr. McDearman.

DR. McDEARMAN: In this case, I am pretty sure that serology would have been important.

DR. STEFFEE: It occurs to me that there is one question that I haven't answered and that is why did the lymph nodes go down? I don't have an answer unless the mustard knocked out the lymphocytes and which were part of the reason for the lymphadenopathy and left the Histoplasma alone. It wasn't purposely misleading; this is just what happened, and I don't know an explanation for it. Dr. Rossett.

DR. ROSSETT: Well, I think I would first like to ask Dr. McDearman about how many positive blood cultures she had in histoplasmosis. I believe Dr. Steffee said a lesion of this type accounts for 25% positive blood cultures. To me that is a fantastic feat. I believe that's an error. In what percentage do you have positive cultures?

DR. McDEARMAN: Zero, except for bone marrow.

DR. STEFFEE: This is based on a paper in *The American Journal of Medicine*.*

DR. ROSSETT: This was very fruitless when we tried.

DR. McDEARMAN: We certainly make every attempt and I think we do have a good bacteriologist doing the work and we do not get positive blood cultures.

DR. ROSSETT: From the clinician's viewpoint, we will have to see what we can learn from this. I believe Dr. McCall placed his finger on it very accurately. We went on to use x-ray therapy, antibiotics, and nitrogen mustard and still didn't convince the patient to have the nodes removed, let alone having a liver biopsy done which could have been done transpleurally; either would have given you the diagnosis in a wrapped up package.

DR. McCALL: Dr. Steffee, are you reasonably sure that the patient did not have some type of lymphoma—perhaps a lymphosarcoma? The patient had x-radiation therapy and at least 0.2 or perhaps maybe 0.3 mg./Kg. nitrogen mustard.

DR. STEFFEE: I certainly recognize that early treatment of lymphoma or leukemia may destroy all morphologic evidence of the disease. You can biopsy anything you want to biopsy and you won't be able to find the disease. This is perfectly true.

DR. McCALL: Especially the first treatment.

DR. STEFFEE: Yes, but this is a half dose of nitrogen mustard, and I wouldn't expect this kind of a dose to completely wipe it out. Certainly, there is nothing in the histologic material to give any hint of lymphoma.

DR. McCALL: We are told in the protocol, and I accept it as fact, that there were large nodes and they disappeared after nitrogen mustard. This points out again the desirability of exact, accurate, and detailed description in the clinical record. It is inconceivable to me that nodes of histoplasmosis—or any other granulomatous infection—would disappear in a period of 7 days with nitrogen mustard therapy. If

*Rubin, H., M. L. Furcolow, J. L. Yates, and C. A. Brasher. *Am. J. Med.* 27:278, 1959.

this is indeed a fact, this still means lymphoma. However, I recognize the real possibility that these nodes, whatever their size, may never have actually become smaller.

Because of the interstitial nature of the lung infiltrate, there had to be hematogenous dissemination, and therefore, bone marrow culture would have been desirable, even if node biopsy were not available. However, it is also inconceivable to me that a man this ill could not have been talked into a lymphnode biopsy.

I am forced to conclude that either the pathologist missed a diagnosis, or much more likely, that the fact of the disappearing nodes was, in reality, fiction.

DR. STEFFEE: The findings of the au-

topsy indicated large nodes in the mesenteric area and in the hilum.

STAFF PHYSICIAN: Were these cervical nodes?

DR. STEFFEE: The prosector did not look. We have no histologic sections from the cervical, inguinal, or the axillary area, where the adenopathy was clinically.

ANOTHER PHYSICIAN: Was there adrenal involvement?

DR. STEFFEE: Yes, the adrenals were virtually wiped out. This may have contributed to the terminus to be sure.

DR. PETTY: Were these large enough mesenteric nodes to account for what we see on the film?

DR. STEFFEE: I think so. Are there any other questions? or comments? Many thanks again to Dr. McCall and to Dr. McDearman.

Acute Childhood Leukemia. Zuelzer, W. W., and Flatz, G. *Am. J. Dis. Child.* 100:886, 1960. Acute (lymphatic) childhood leukemia was studied for a 10-year period in 169 patients. In the 1st of two 5-year periods the therapy consisted of 2 agents—steroid hormones and antifolic acid agents. In the 2nd period 3 agents were used, the previous 2 as well as 6-mercaptopurine. Supportive treatment with transfusions, antibiotics, etc., was the same in both periods. The remission rate increased from 84% to 94% and the mean survival from 8.1 to 13.0 months. A comparison between long term survivors and the group as a whole disclosed no significant differences in a number of parameters which could be evaluated initially, except for the presence or absence of leukopenia and hyperleukocytosis respectively. Regardless of the method of management and degree of bone marrow or other organ involvement, those patients whose initial white blood-cell counts were in the leukopenic range responded best and had the longest sustained or repeated remissions. The duration of these remissions in 10% of the cases extended beyond 28 months and justifies medical

and surgical intervention in the presence of a variety of complications now observed with greater frequency because of the extended life span.

Incidence and Treatment of Thyroid Disease. Fowler, E. F. *Arch. Surg.* 81:733, 1960. From 1936 to 1959, patients were operated on for disease of the thyroid at Illinois Research and Educational Hospitals. Surgery of the thyroid fell from 14.8 to 5.2 per cent of general surgical admission. Surgery for toxic diffuse goiter fell from 44.6 to 19.0 per cent and for toxic nodular goiter from 34.8 to 6.9 per cent. However, surgery increased for thyroiditis from 0.8 to 5.6 per cent, for nontoxic nodular goiter from 17.7 to 61.8 per cent, and for carcinoma from 2.1 to 6.9 per cent. Carcinoma was found in 4.5 per cent of all cases of thyroiditis and, recently, in 8.5 per cent of solitary and 5.1 per cent of multiple nontoxic nodular goiters. I¹³¹ was used in 23.1 per cent of patients with toxic diffuse goiter and 30.0 per cent of patients with toxic nodular goiter because of surgical contraindications.

President's Page

GOLD MINE SEEN IN TRAFFIC STUDY



RALPH O. RYCHENER,
M.D.

We are staggered at every turn, by the carnage of human life as the result of traffic accidents on our streets and highways.

The Memphis and Shelby County Medical Society has rendered an outstanding public service by participating in the development of a study of the drivers involved in accidents. Investigators in the survey have been elated over the information obtained from drivers in Memphis and Shelby County, as a result of a long-range scientific study of the medical history of drivers involved in accidents.

The preliminary findings culminate a project that began more than three years ago when the Medical Society named its first committee on traffic safety. It took a year of research and study to decide how the project should be carried out. The actual submission of the medical history questionnaires to all drivers involved in accidents began March 1, 1959. Drivers involved in accidents were requested to answer ten questions submitted by police and traffic officers during the period of March 1, 1959 and March 1, 1960.

Out of 28,066 persons involved in accidents, 27,411 answered the questions. This proves that the motoring public is just as interested as the specialist in what causes traffic accidents.

Helpful conclusions were drawn from the study. The results showed how many persons that drove into accidents had recent medication, how many had physical impairments and how many were in various age groups. This is the kind of field work and applied science that can unravel mysteries that urgently need to be understood. It has taken three years to organize the project in Shelby County and to obtain results.

Statistics are still being compiled on the study and the statisticians believe that they will find a high frequency in repeat accidents by accident-prone drivers. During the 12 months of accidents on Shelby County streets and roads there were 1,591 persons who admitted to two accidents in six months, and 1,230 had a traffic mishap less than a year before. This seems to mean that a small fraction of the drivers are causing a disproportionately large part of the trouble.

For 3,673 to say at the scene of a crash that a traffic law had been violated is a most emphatic commentary on the probability that traffic regulations are reasonable and would protect life, limb and property if motorists followed the directions better. It is hardly less than astounding to have 51 drivers admit that they were asleep at the wheel.

Fitness of drivers is of course the chief interest of the medical profession. Curative legislation is an objective. It has been suggested that doctors further cooperate in the preparation of law changes, based on this study, and present them to the legislature this month.

Whatever will be the result from this study, Tennessee physicians can take pride in the fact that one large county medical society in our state has taken the lead to study one of man's greatest problems in the Twentieth Century, that of reducing and controlling the lethal toll of human life on our streets and highways. No greater public service could be rendered.

Ralph O. Rychener, M.D.

President

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Address papers, discussions and scientific matter to R. H.
Kampmeier, M.D., Editor and Secretary, 8210 Vanderbilt
University Hospital, Nashville 12, Tennessee
Address organizational matters to Jack E. Ballentine,
Executive Director, 112 Louise Avenue, Nashville 5, Tenn.

R. H. KAMPMEIER, M.D., Editor and Secretary
Vanderbilt University Hospital, Nashville

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JANUARY, 1961

EDITORIAL

PREOPERATIVE MANAGEMENT OF FLUIDS ELECTROLYTES AND NUTRITION

The success or failure of a surgical procedure depends upon the proper preoperative management of the patient. We have often wished for some magic slide-rule to tell us whether or not a patient is a good risk for his contemplated surgery. The electrocardiogram, the chest roentgenogram, various blood chemistries and the fifteen minute PSP. test all serve as guides in the preoperative evaluation of patients.

Recently, Mansberger has emphasized fluid, electrolyte and nutritional abnormalities in the preoperative management of patients. His discussion of the correction of water and electrolyte imbalance stresses the importance of planning therapy according to the specific derangement encountered. Easy accessibility of intravenous fluids has led to their misuse. Mansberger states that fluids given intravenously constitute specific

medication and should not be ordered by a physician who is not fully aware of the exact content of solutes and effect of the therapeutic agent, any more than digitalis should be given to a patient in congestive failure by a physician who does not know the digitalizing dose or the potential toxic effects of the drug.

Dehydration with subsequent oliguria may be brought on by depletion of either water or salt and an accurate diagnosis is essential to proper management. With water depletion, water is first lost from the extracellular space, then lost from the intracellular space and, finally, in an attempt to maintain osmotic relationships there is increased urinary excretion of sodium and chloride from the extracellular space. The loss of intracellular potassium and its subsequent excretion are also part of the same mechanism to maintain tonicity. The therapeutic administration of isotonic solutions can only result in increased concentration of sodium and chloride in the extracellular space bringing on more loss of water from the intracellular compartment with further desiccation of cells. Hence, the principle of treatment of water depletion must be to supply water in excess of electrolytes.

On the other hand, dehydration following loss of body fluids containing sodium and chlorides, as in sweating, diarrhea or vomiting, produces a different problem. Here water from the extracellular space is drawn into the intracellular space in an attempt to maintain tonicity, since the loss of electrolytes from the extracellular space cannot be compensated for by a transfer of ions from the intracellular compartment. The resultant plasma volume depletion produces an outpouring of antidiuretic hormone with oliguria. Subsequently, progressive hypovolemia and increased cellular overhydration may result in renal failure. Hypertonic solutions are the only means suitable for correcting this type of dehydration.

Deficiencies of intracellular electrolytes, potassium and magnesium, are also important and must be recognized and treated before surgery. A potassium deficit, due to either a decreased intake or increased loss, eventually brings about a depletion of potassium in the intracellular space. If sodium intake has been high there may be a shift

of sodium ions into the cell to replace the potassium ions. Potassium deficiency can produce symptoms and signs reflecting involvement of the neuromuscular and cardiovascular systems. Certain thoughts regarding the administration of potassium are emphasized by Mansberger. First, potassium should not be given parenterally to patients who do not have an adequate urinary output. Secondly, the association of hypochloremic alkalosis and hypokalemic alkalosis must be considered in those individuals whose hypochloremic alkalosis does not respond to chloride therapy. Occasionally, the addition of potassium will correct this difficulty. Finally, potassium should not be used too rapidly or overenthusiastically, since the temporary hyperkalemia which may result may be fatal.

Recently, magnesium deficiency has been recognized. A clinical picture like hypocalcemic tetany results and intramuscular magnesium is the treatment of choice.

Good nutrition is essential in the preoperative preparation of the surgical patient. Although optimum nutrition is best obtained by the oral route, intravenously administered nutritives may be of significant value. The average patient requires one gram of protein per kilogram per twenty-four hours to prevent depletion of body protein stores and thirty calories per kilogram of body weight per twenty-four hours. This means that there must be thirty calories available for each gram of protein given. Patients under severe stress may need more protein and consequently more calories. Solutions of protein hydrolysate seem to be the best, easiest and most economical methods of administering protein intravenously. To provide sufficient calories, 7.5% alcohol and 10% dextrose or fructose should be added to the protein hydrolysate. Although intravenous fat is now available commercially, certain major complications of this use of fat, including hepatomegaly, jaundice, thrombocytopenia and spontaneous gastrointestinal hemorrhage, restrict its use. For safety, infusions with fat should be limited to 14 units in any one treatment period and also should be limited to one 500 cc. infusion in any 24 hour period.

Medicine can no longer tolerate generalities such as, "get him in better shape," "get

him hydrated," or "we'll operate in the morning." To provide our surgical patients the best chance of survival and smooth postoperative convalescence requires accurate diagnosis and specific treatment of fluid, electrolyte and nutritional abnormalities in the preoperative period.

A. B. S.

Reference

Mansberger, Arlie R., Jr.: Preoperative Fluid Electrolyte Balance and Blood Volume, *J.A.M.A.* 174:109, Dec. 10, 1960.

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OCCUPATIONAL MEDICINE

A paper appearing in this issue by Dr. P. J. Flippin attracts attention to the subject of Occupational Medicine, a term which has replaced the older one of industrial medicine. This area of interest, and actually of specialization, has been an expanding one in the past decade and more, a response to new thinking and social concepts in a changing and advancing society. It forms a part of the change which is slowly progressing within the practice of medicine.

Certainly within the boundaries of medical practice, the emphasis is gradually being directed toward prevention. Twenty-five years ago the doctor was devoting his full day to episodic disease,—pneumonia, the treatment of cardiac failure, acute appendicitis and acute osteomyelitis. Today we hear more about immunization, prenatal care, well-baby care, nutrition, the prevention and/or control of arterial disease and diabetes by avoiding obesity; the surgeon practices vascular surgery to prevent the loss of a limb, or repairs a congenital cardiac lesion to extend life and prevent complications from the defect. The efforts in psychiatry are largely directed toward mental health and the avoidance of deviations in personality, rather than to the treatment of actual psychosis.

Industrial medicine consisted in the main, as of a couple of decades ago, of the treatment of injuries which occurred in a plant,—actually it consisted more or less of a practice of traumatic surgery. However, over the years, even before that time, there were a few physicians who, with the cooperative interest of management in large industry, were developing a concept of pre-

ventive medicine. With the assistance of sanitary engineers and toxicologists they were studying and correcting physical deficiencies in the industrial plants with an eye to maintaining the health of the employee. As was to be anticipated the pressure of special education developed and, in 1948, the first formal training programs in industrial medicine were set up.¹ A number of these are currently well established, in Departments of Preventive Medicine in medical schools, and graduate programs of 3 years in length lead to eligibility for certification by the American Board of Preventive Medicine, the specialty of Occupational Medicine being officially recognized in 1955. The specialty of occupational medicine is thus established, and in an era of an expanding technology will grow and attract medical men—a certainty as one contemplates the challenges, for example, of atomic radiation and aviation medicine. "Big" industry no longer needs to be sold upon the advantages of preventive medicine for its employees—it "pays off"; "big" organized labor is demanding it more and more. The interest of these parties may make a doctor hesitate in moving into an area where he may anticipate pressures. Ashe¹ has said, "No matter by whom the physician is paid he is obligated to maintain his professional integrity and to give only sound advice for the health of the persons for whom he is responsible. Certainly, unless he is willing, he need not be the hired servant of management or the partisan of the labor organization. Indeed, the better his training, competence and judgment, the more independent he will be in his professional capacity."

This then is the developing and present state in occupational medicine as a specialized sphere of medicine. But there is yet another angle and possibly even a greater one, which will not be solved by a specialist, certainly at this time, because there are not enough specialists and because economics will have its say. It is said that 99% of the

employers of the country have fewer than 500 persons on the payroll, and that 80% of the employed work for these smaller industries.² Thus, most of the 50,000,000 workers of the country will probably not feel the benefits of the specialist in occupational medicine. Yet many of these deserve the same care, in terms of preventive medicine, and may need them even more. (The small plant without services of a sanitary or hygienic engineer is more likely to have its safety deficiencies go unrecognized than in a large plant.) Here then is the role of the part-time physician.

The Industrial Medical Association and Council on Occupational Health agree that the part-time physician can and should meet the demands of occupational medicine in small industry.³ Shepard² outlines the desirable qualifications for the part-time physician in occupational medicine: (1) he must be a good doctor and like people; (2) he must be flexible in a new environment and be willing to consult with specialists in this new area; (3) he must be interested in preventive medicine which has many ramifications; (4) he should be a good administrator; (5) he should be familiar with community organizations and facilities and have good rapport with his confreres and the local county medical society; (6) he should know how environmental factors affect performance and the well-being of the worker; (7) he should be available for health counseling with employees; and (8) he should have direct access to top management. (These are all amplified in Shepard's paper.)

Part-time occupational medicine should offer a challenge to the generalist or family physician. It is a "natural" for him, with his background of a broad viewpoint and experience in medicine. Surgery, internal medicine, psychiatry (counseling employees,

²Shepard, William P.: The Practice of Industrial Medicine—What It Takes, *J. Occupational Med.* 2:255, 1960.

³A.M.A. Committee on Medical Care for Industrial Workers: Survey of Physicians' Services Provided to Small Plant Occupational Health Programs, report by F. J. Holroyd, M.D., Chairman of A.M.A. Council on Industrial Health and Council on Medical Service. (Available A.M.A.)

¹Ashe, William F.: Education for Industrial (Occupational) Medical Practice, *J. Occupational Med.* 2:305, 1960.

mental health) and preventive medicine are all rolled in one, so to speak. Preventive medicine will probably need the greater development. Short courses are available in a number of medical schools, and the School of Public Health of Columbia University offers a program of home study,—all designed to assist the interested industrial physician to be more than a traumatic surgeon.

★

R. H. K.

Special Item

Abstract of the Special Session of the House of Delegates—December 11, 1960

The TSMA House of Delegates met in special session at the Hermitage Hotel in Nashville, on December 11th, with Dr. W. O. Vaughan, Chairman of the Board of Trustees, temporarily presiding. In the absence of the speaker, it was by unanimous vote of the House that Dr. Chas. C. Trabue was requested to act as temporary speaker for the session.

Dr. Bland Cannon read a letter from TSMA's President, Dr. Rychener, who was unable to attend the meeting. Dr. Rychener stated in his letter the background and the issues to be determined at the special session.

The purpose of the called session was to determine policy and recommendations to be presented to the Governor pertaining to the medical assistance to the aged program as called for in the Kerr-Mills Bill, Public Law 86-778, adopted by the 86th Congress.

The chairman of the Board of Trustees, Dr. Vaughan, reviewed the pertinent details of the meetings of the Executive Committee of the Board, with a committee appointed by the Governor. He stated the recommendations that had been presented to the Board of Trustees by the Executive Committee with the recommendations as adopted by the Board at a special meeting on November 20, 1960. A complete evaluation of the proposed program for caring for aged persons under medical assistance to the aged was reported together with the number of persons that would be involved in Tennessee, as well as a report of the various conferences that were conducted prior to submitting recommendations to the Board of Trustees.

The Board of Trustees recommended that in-hospital care be one of the services rendered. In addition, nursing home care was recommended plus a limited formulary for drugs to be included in services rendered. The Board also made its recommendations as to criteria for eligibility of aged persons that would be covered under the proposed program.

Mr. J. E. Ballentine, Executive Director of TSMA, reviewed in detail the provisions included under Public Law 86-778 as well as the manner in which the old age assistance program is presently administered in Tennessee. He outlined the phases of the medical assistance to the aged program that were allowable under the act passed by Congress. He fully explained the Kerr-Mills Bill. Services included under the law were explained. Matching amounts paid to states by the federal government were reported along with other statistical information.

Following the presentations of background information, the House spent some four hours in discussing the policy to be adopted by TSMA relative to the proposed program in Tennessee.

Considering the recommendations of the Board of Trustees, the Speaker requested the House to first consider the recommendation pertaining to in-hospital services for eligible patients. There was considerable discussion presented from Dr. H. L. Monroe, Dr. Bland Cannon, Dr. George Smith, Dr. Jack Armstrong, Dr. Carl Gardner and many other members of the House pertaining to physicians' fees under the proposed program. Considerable information was furnished to the House by Mr. Shannon, Chicago, a representative of the American Medical Association. He reported on policies being followed nationally.

Dr. Carl Gardner, Columbia, pointed out that four types of care that doctors are going to be called on to give were troubling many doctors in the state. He named (1) house calls, (2) office care, (3) nursing home care, and (4) hospital care. He pointed out that members of the Maury County Medical Society favored unanimously that some provision be made for including physicians'

fees in the medical assistance to the aged program.

During the discussion, Dr. Roy Tyrer, Memphis, presented the following motion: "That the administration of the medical assistance to the aged program be directed by the Department of Public Health (this is headed by a physician) and that a 12-member advisory board be established to be composed of six physicians appointed by the Board of Trustees of TSMA and six members appointed by the Governor. It is suggested that the professions of hospital administration, health insurance and dentistry might advantageously be represented in the appointments. It is further recommended that this advisory board meet in regular session at least once quarterly and that the term of appointment be for three years and the appointments staggered in such a way that two physicians and two executive appointments shall be made each year."

The motion was duly seconded. There was some discussion as to whether or not this recommendation could be carried out, but it was the will of the House that it be placed as a recommendation. However, it was directed that the recommendation be referred to the Board of Trustees for implementation, if possible. **The motion presented by Dr. Tyrer was put to a vote and unanimously adopted by the House of Delegates.**

The speaker called for the House to return to the recommendation of including inpatient hospital services as recommended by the Board of Trustees. Following further consideration, the question was put by the speaker and the recommendation presented by the Board for **in-hospital services to eligible persons over 65 years of age was approved by the House.**

The House next discussed the recommendations for nursing home care. There was a great deal of discussion, and clarification required of this recommendation. A motion by Dr. James N. Thomasson to delete a part of this section submitted by the Board of Trustees concerning nursing home care was approved. **The recommendation as amended was put to a vote and adopted by the House.**

The speaker presented recommendation

three of the Board of Trustees dealing with outpatient drugs. Dr. George Smith presented a motion to include outpatient hospital or clinical services, laboratory and x-ray services, but the motion was withdrawn and a later motion was presented by Dr. Smith that laboratory and diagnostic x-ray services in the doctor's office or in the hospital outpatient department be provided. The motion was seconded. Following considerable debate, **this motion was adopted by the House.**

The House returned to the discussion of whether or not physicians' fees should be included in the recommendations to the Governor as pertaining to the medical assistance to the aged program. Dr. Bland Cannon discussed this matter at considerable length along with Dr. Armstrong and numerous other delegates. The speaker pointed out that there was not a motion before the House pertaining to physicians' fees. Dr. Bland Cannon read a recommendation in the form of a motion by Dr. Ralph Rychener pertaining to physicians' fees. However, after considerable discussion, the motion was tabled.

Dr. Carl Gardner, Columbia, made the following motion: "That the program cover reasonable physicians' fees for services performed in the office and on house calls, including a reasonable mileage allowance where the service is out in the country." Dr. Gardner read a statement prepared by the Committee on Indigent Care of the AMA for the benefit of the House. It dealt with the matter of physicians' fees. The motion was seconded. Discussion followed from Dr. Monroe, Dr. Ingram and other members of the House. Following these discussions, the speaker called for the question on physicians' fees to be included under the program in keeping with Dr. Gardner's motion. In the discussion, a question arose relative to total payments of hospital cost rather than the present 85% reimbursement of these costs as now being paid to hospitals. This matter was discussed at length. Dr. Hawkes of Memphis made the motion to amend wherein that full hospital costs be provided under the program. This was discussed and **the motion failed to pass the House of Delegates by a vote of 23 to 17.**

The original motion presented by Dr. Carl

Gardner to include physicians' fees under the program was put to a vote and the motion was defeated.

With minor amendments, the recommendation presented by the Board of Trustees for eligibility of aged persons under this program was approved by the House of Delegates.

Dr. G. H. Berryhill presented an amendment to the Board of Trustees' recommendation which was approved and included in the recommendations adopted by the House.

The House approved and added sections for covering catastrophic illness over the limits that were approved in the recommendations of the Board of Trustees. This amendment and the added section covering catastrophic illnesses was approved by the House for recommendation to the Governor.

THE FINAL AND COMPLETE RECOMMENDATIONS, INCLUDING ALL AMENDMENTS APPROVED BY THE HOUSE OF DELEGATES, ARE INCLUDED IN THE ACTIONS OF THE HOUSE OF DELEGATES AND LISTED ON THE EXECUTIVE DIRECTOR'S YELLOW PAGE IN THIS ISSUE OF THE JOURNAL.

Other Business

The chairman of the Medicare committee, Dr. James A. Kirtley, outlined a problem presented to the committee concerning a reduction in Medicare fees as contained in the previous contract. He pointed out that the Department of Defense had requested the Association to accept the reduced fees as submitted by the Department of Defense and that this recommendation had not been acceptable to the committee and the matter was referred to the Board of Trustees for further action.

This entire matter was discussed briefly by the House. A motion was presented by Dr. Kirtley that the House of Delegates instruct the chairman of the Board of Trustees to negotiate with the Defense Department at the time of the renewal of the contract, March 1, 1961.

The intent of the motion was that negotiations continue with the Department of Defense, based upon the existing fee schedule, but the House of Delegates directed

that the entire Medicare problem be reviewed by the House in the April, 1961, meeting. **This motion was adopted.**

J. E. Ballentine

DEATHS

Dr. Charles Young Bailey, Greeneville, died on December 9th at a Greeneville hospital.

Dr. Granville Dexter LeQuire, 81, Maryville, died on November 18th at a Maryville Nursing Home.

Dr. George Lyman Rea, 58, Tazewell, died November 22nd at the Claiborne County Hospital.

Dr. Featherstone Douglass, 58, Dyer, died November 24th at his home.

PROGRAMS AND NEWS OF MEDICAL SOCIETIES

Memphis-Shelby County Medical Society

The regular meeting of the society was held on October 4th, at the Institute of Pathology auditorium. The scientific program consisted of the following: "Radiography in Appendicitis" by Dr. Benjamin Greenberg; "General Studies in Cineradiography" by H. Colley Gardner; and "Incidence of Stomach Cancer" by Dr. H. H. Halford. On the evening of December 6th, the society met at the Memphis Country Club to elect officers for 1961. Dr. Alvin J. Ingram was named president-elect. He will take office in 1962. Dr. Bland W. Cannon assumed the presidency succeeding Dr. Duane Carr. Other new officers are: Dr. A. Roy Tyrer, Jr., vice president; Dr. Charles L. Clarke, secretary, and Dr. William T. Satterfield, treasurer.

Greene County Medical Society

The regular monthly meeting of the Greene County Medical Society was held on December 6th at the Elks Club. The program consisted of an address by Mr. Edd Sanders of the Social Security Office in Johnson City. Following his remarks, a film was shown on social security disability.

The following officers were elected for 1961. They were: Dr. Haskell Fox, president; Dr. Lewis McGuffin, vice-president; Dr. Luke L. Ellenburg, secretary-treasurer.

The Society extended congratulations to

Dr. Ellenburg for being elected a Fellow of the American Academy of Pediatrics.

Coffee County Medical Society

Dr. Coulter Young, Manchester, was recently elected president of the Coffee County Medical Society, succeeding Dr. Ralph Brickell of Tullahoma. Dr. Young was elected at a dinner meeting of the society at the Tullahoma Golf and Country Club on December 13th. Dr. Clarence Farrar, Manchester, was named vice-president and Dr. Charles B. Harvey, Tullahoma, was elected secretary-treasurer.

Robertson County Medical Society

Dr. J. Wesley Atwood was elected president of the Robertson County Medical-Dental Society at a recent meeting held in the Jesse Holman Jones Hospital. Other officers elected at the meeting were: Dr. Robert DeBerry, vice president, and Dr. W. P. Stone was reelected secretary-treasurer.

The society meetings are conducted on the third Monday evening each month.

Chattanooga-Hamilton County Medical Society

At the society's regular meeting conducted on December 6th in the Interstate Building, Dr. Edward G. Johnson was named president-elect of the Chattanooga and Hamilton County Medical Society. He will assume office in 1962. Dr. Augustus McCravey will assume the presidency in January 1961. Dr. George Henshall is the retiring president. Dr. Charles W. Hawkins was re-elected for a second term as secretary-treasurer.

Consolidated Medical Assembly of West Tennessee

The society met on December 6th at the Jackson Golf and Country Club. This was the regular Christmas meeting for doctors and their wives, an annual affair of the society.

NATIONAL NEWS

The Month in Washington (From the Washington Office, AMA)

Physicians are being urged to cooperate fully to get their states to participate as

soon as possible in the new federal-state program for medical care of needy and near-needy older persons. The medical profession also has been alerted to the dangers of relaxing its opposition to tying in medical care of the aged with Social Security. It is probable that the Kennedy Administration will try in 1961 to get Congressional approval of such legislation.

E. Vincent Askey, M.D., President of the American Medical Association, pointed out to the recent Washington meeting of the AMA House of Delegates that proponents of the Social Security approach had a pledge of support from the successful Democratic candidate for President.

"While our profession clearly may face a hard struggle in the 87th Congress on the issue of medical aid for the aged under Social Security, there is no ground for defeatism!" Dr. Askey said.

"Our cause is far from lost. We know that our policy position is in the best interests of all Americans, the aged included, and our willingness to defend this policy must be strengthened and maintained."

Dr. Askey reminded the House of Delegates that "medicine has many friends in both parties in Congress today."

A few days later, Sen. Harry F. Byrd (D., Va.), Chairman of the Senate Finance Committee which handles Social Security legislation, reiterated his opposition to a compulsory medical care plan under Social Security. He said: "I am opposed to the (Democratic party) platform recommendation for compulsory medical service and hospitalization under the Social Security system. I am convinced this would lead to socialized medicine with the possibility that it would bankrupt the Social Security trust fund. This matter came before the Finance Committee and was fought out in the post-convention session of Congress last August. The Senate voted 51-44 in opposition to the Democratic platform proposal, and instead adopted a fair plan for medical service and hospitalization for those in need of it."

Dr. Askey urged that all county and state medical associations provide "the medical leadership necessary to implement the Mills-Kerr bill (the new federal-state program) as rapidly as possible." And the

House of Delegates adopted such a resolution.

"We must put forth a sincere and concentrated effort during the coming year to make the Mills-Kerr law effective, to show that it can, practically as well as potentially, solve the problem of medical care for the aged," Dr. Askey said.

President-elect John F. Kennedy's first Cabinet appointment was Governor Abraham Ribicoff of Connecticut as Secretary of Health, Education and Welfare—the official with primary responsibility for carrying out the federal part of the Mills-Kerr program.

Ribicoff, 50, was an early supporter of Kennedy for the Presidential nomination. He was twice elected governor of Connecticut. Before that, he served as a Hartford, Conn., police judge, a member of the state legislature and a member of the national House of Representatives. As governor, he inaugurated a comprehensive traffic safety program with strong penalties.

★

The Sabin oral polio vaccine will not be available in sufficient quantity in 1961 for large scale use. Leroy E. Burney, M.D., Surgeon General of the U. S. Public Health Service, told the recent Clinical Meeting of the AMA that many problems involved in taking the oral vaccine out of the laboratory and into mass production had not been solved.

In light of this fact, both the AMA House of Delegates and Dr. Burney urged that the widest possible use of the Salk vaccine be encouraged. Dr. Burney said that large numbers of the U. S. population, including almost half of the children under five, had not been fully vaccinated with the effective Salk vaccine.

Dr. Burney said the problems of integrating the oral vaccine into the present program of immunization against polio "are many and complex."

"Only the future can tell whether control of poliomyelitis will be accomplished through a live, orally administered vaccine, the killed vaccine, or a combination of both," Dr. Burney said.

★

The Food and Drug Administration issued stricter rules, some effective Jan. 8 and others effective March 9, governing promo-

tion and marketing of prescription drugs. The new regulations are designed to insure safe use of the drugs.

Under the new regulations, manufacturers must disclose hazards, as well as advantages, of the drugs in promotional material sent to physicians. Manufacturers can be denied permission to market drugs if they refuse to permit FDA inspection of manufacturing methods, facilities, controls or records.

The FDA deferred until later action on its proposal to require every package of drugs sold to pharmacies to contain an official brochure on their use and hazards. The AMA proposed instead that it be given the responsibility of getting such information directly to physicians.

★

Foreign interns who failed medical examinations last September may remain in this country until at least next July 1. In cooperation with the State Department, the AMA agreed to extend for six months a Jan. 1 deadline for dismissal of foreign interns unless they pass the examinations through the Educational Council for Foreign Medical Graduates.

The flunking interns will be given another opportunity to take the examinations in April. Meantime, they must be taken off patient care and their hospitals must set up training programs for them.

The AMA Council on Medical Education and Hospitals, said that this policy would be carried out judiciously and that occasional exceptions would be granted where circumstances warranted.

Six MD's Elected to House of Representatives

In House elections, all four members who are MD's were victorious and they were joined by Drs. Durward G. Hall (Mo.) and Edwin R. Durno (Oreg.). Both are Republicans. Returned to their Congressional seats were Republicans Walter Judd (Minn.) and Ivor D. Fenton (Pa.) and Democrats Dale Alford (Ark.) and Thomas E. Morgan (Pa.). Defeated in their first time bids for Congress were a Democrat, Dr. John D. Kaster (Calif.) and three Republicans, Drs. Floyd M. Burgeson (Ia.), Charles Muzzicato (NY) and L. F. Nadrowski (NY).

AMA Seeks to Advise on Wise Use of Health Care Dollars

The American Medical Association has launched a "comprehensive study and action program" to guide the consumer in spending his health care dollars more wisely. The AMA program, dedicated to promoting the highest quality health care at the lowest cost, can help the consumer dramatically reduce his expenditures on health care without lowering the quality or effectiveness of it one bit. Purpose of the effort is to arm the consumer with facts in the hope that he will use them.

One of these barriers is the ineffectiveness of a vast number of nonprescription or over-the-counter drug products which the AMA says is currently being used by the public in great quantities and at a cost running into millions of dollars annually.

The AMA said physicians also owe it to their patients to discourage them from "throwing their money out the window" on devices, so-called "cures," food fads, "health literature," and many other forms of quackery currently bilking the American public out of additional millions of dollars a year.

"The average American family now spends about \$18 a month on non-prescription or over-the-counter products. While these drugs are safe for unsupervised use in most cases, many of them actually bring little benefit from a health standpoint and, for the most part, represent dollars wasted.

"The goal of the AMA program is a higher quality of health care for a greater number of people at a lower cost."

Results of Recent Health Insurance Institute Survey

Tennessee physicians will be interested to know that John Q. Public consults his physician five times annually, on the average. A recent survey conducted by the Health Insurance Institute, discloses that this adds up to more than 852 million visits to a physician each year, based upon data collected by the U. S. Department of Health, Education and Welfare.

Most visits take place in the doctor's office. Two out of three visits, or 66% occur in the office, 10% at home and 14% in an outpatient clinic of a hospital, industrial health unit or other locations.

As for the purpose of the visit, 75% were for diagnosis and/or treatment of an illness or injury. Eight percent were for general checkups and 7% were for immunizations. Residents of the West and Northeast consult doctors more frequently than persons living in the Mid-West or South. Tennessee is included in the Southern region where 4.7 visits per person were made. Persons with incomes under \$2,000 per year had a rate of 4.6 physician-visits per year compared with 5.7 visits for persons in families earning \$7,000 or more. The city dweller consults his doctor more frequently than the rural resident. Women average the greater number of physician visits than men, 5.6 a year to 4.4.

MEDICAL NEWS IN TENNESSEE

Tennessee Public Health Association

Approximately 800 public health doctors, professional personnel and civic leaders convened December 7th for the 21st annual meeting of the Tennessee Public Health Association. Dr. R. H. Hutcheson, Tennessee Commissioner of Public Health, was the keynote speaker.

Problems of the aging population was the theme of the meeting. Members and delegates heard talks on various aspects of the subject by Dr. James A. Crabtree, University of Pittsburgh; Dr. Berwyn F. Mattison, Executive Director of the American Public Health Association, New York; Mr. Eugene Lehr, Public Health Service, Washington; Dr. M. B. Bethel, University of North Carolina; and Dr. W. H. Aufranc, Public Health Service, Atlanta.

Workshops were arranged for health officers, nurses, laboratory technicians, sanitarians, statisticians, clerks and health educators. The meeting was conducted over a three day period and at the opening session, Governor Buford Ellington addressed the Association.

Chattanooga-State Psychiatric Hospital

Dr. Nat Winston, Jr. has been named superintendent of the Chattanooga-State Psychiatric Hospital. He will prepare for the opening of the hospital in the early spring. Dr. Winston stated that staffing of the hos-

pital was the principal problem for the present. The initial staff for the hospital, including both administrative and professional, will be about 100. The hospital will open with 150 beds with plans for 1,500 beds ultimately.

Patients will be evaluated and given intensive treatment at the new \$3¼ million facility and if long-term treatment is indicated, transfer will be recommended, Dr. Winston stated.

The Moccasin Bend Hospital will be the state's first intensive treatment center for the mentally ill.

State Medical Aid Bill Proposed

The Tennessee Public Welfare Commissioner reports the state will introduce a measure early in the 1961 State Legislature, allowing Tennessee to participate fully in the new federal medical aid for the aged program. Commissioner Scott stated that Tennessee is already eligible for the program as it relates to the aged who receive welfare assistance. The legislation would allow the state to participate in the part of the program which provides aid to persons over 65 years of age who cannot afford adequate medical care and do not receive public assistance.

The Welfare Department is considering a \$500,000 annual appropriation, Commissioner Scott stated. With federal contributions, Tennessee would receive just over \$2 million a year. The federal government will pay 76.5% of the cost of providing medical care for those not on public rolls.

More Dollars Seen for Medical Research

More of your tax dollars are bound to go into medical research after John F. Kennedy becomes president. These funds will be channeled chiefly through the National Institutes of Health, the big research arm of the Department of Health, Education and Welfare. In the past year, the National Institutes of Health granted stipends to scientists in Tennessee totaling \$2,735,928.

Vanderbilt University School of Medicine

The John A. Hartford Foundation of New York has awarded a grant of \$389,663 to Vanderbilt Hospital for a study of heart disease. Specifically the grant will support studies of heart functions in persons with

heart disease under conditions of exercise, drugs and surgery.

★

A team of Vanderbilt University researchers have been awarded a U. S. Public Health Service grant of about \$300,000 which will finance their investigations of a heart lung disease which kills thousands of premature infants. The new grant included \$123,000 for the year 1960 and about \$53,000 a year for the next three years.

Meharry Medical College

A \$622,000 Hill-Burton grant has boosted Meharry Medical College's endowment fund to \$1.5 million in its long-range \$20 million development program. Seventy beds will be added which will boost the total to 249. This is for an expansion of the Hubbard Hospital operated by Meharry.

University of Tennessee College of Medicine

A postgraduate seminar for business executives in industrial psychology and mental hygiene will be conducted by the University of Tennessee Medical Units in cooperation with the Council on Industrial Mental Health. The seminar, starting January 27th will be directed by Dr. P. J. Sparer, professor of Psychiatry and Preventive Medicine, assisted by professional colleagues and members of the Council. Objectives are continuing education toward a better understanding of human beings in industry and to help executives do a better job.

★

A grant of \$310,227 has been awarded the Medical Units by the National Cancer Institute of the U. S. Public Health Service. The funds will be used over a five year period to train undergraduate medical students and physicians and dentists in cancer research, diagnosis and treatment.

State of Tennessee Department of Public Health

Tennessee State Medical Association
112 Louise Avenue
Nashville, Tennessee
Dear Doctor:

I am enclosing a brief statement of change of procedure involving our Division of Laboratories. Effective January 1, 1961,

the performance of the KRP test will be discontinued and will be replaced by the FTA test.

I will appreciate your inserting this notice in the January issue of the Journal.

December 16, 1960

Yours very truly,
R. H. Hutcheson, M.D.
Commissioner

FLUORESCENT TREPONEMAL ANTIBODY TEST

Effective January 1, 1961, the Division of Laboratories of the Tennessee Department of Public Health will no longer perform the Kolmer Reiter Protein (KRP) complement fixation test on specimens from problem cases in syphilis diagnosis but instead will perform the Fluorescent Treponemal Antibody (FTA) test. It will be necessary that at least two previous routine serologic tests (as the VDRL test) for syphilis have been performed on specimens submitted for the FTA test. A statement of the time tested, the results of the tests, and of the problem involved in the particular case should accompany the specimens. Specimens should not be sent in for a person who has clinical and/or epidemiological evidence of syphilis. The specimens should be sent to Central Laboratory, Nashville, direct or through a Branch Laboratory. Form 610 should accompany each specimen, specifically requesting the FTA test in red at top of form.

It has been found that the KRP test fails to correlate as well with the *Treponema pallidum* Immobilization (TPI) test as does the FTA test.

The antigen used in the FTA test is a pathogenic strain of *Treponema pallidum*, whereas the KRP antigen is prepared from a nonpathogenic (Reiter strain) of a treponeme thought to be a nonpathogenic strain of *Treponema pallidum*. This organism may be grown in a laboratory culture medium, whereas pathogenic strains cannot be. The FTA antigen is the same organism as is used in the TPI test.

The patient's serum is added to a portion of the *Treponema pallidum* antigen which has been placed on a slide. If antibodies are present in the patient's serum they will coat the antigen (*Treponema pallidum*), and will not be rinsed off the slide. If antibodies are not present the antigen will not be coated and the human serum is removed from the slide by several rinse steps. An antiserum which has been prepared against human serum in goats is combined with fluorescein. This tagged antiserum is then placed on the slide described above.

If antibodies were present in the patient's serum (positive serum) they will have coated the surface of the antigen (*Treponema pallidum*). The tagged antihuman serum (combined with fluorescein) will then combine with the treponemal antibodies which have coated the antigen (*Treponema pallidum*). As a result, the trepo-

nemes emit fluorescence when viewed through a microscope which has an ultra violet light source.

Treponemes which have been in contact with serum that did not have antibodies (negative serum) will not take up the fluorescein, and will not fluoresce.

Southern Medical Association

The 54th Annual Meeting of the Association, held in St. Louis, October 31 to November 3 was attended by 86 Tennessee doctors.

PERSONAL NEWS

Dr. H. L. Monroe, Erwin, immediate past-president of the Tennessee State Medical Association, has been named Unicoi County's Citizen of the Year. Recently, Dr. Monroe was named Tennessee's Outstanding General Practitioner of the Year.

Dr. Harry C. Helm, Columbia, has been elected president of the medical staff of the Maury County Hospital. Vice-president is **Dr. Edwin K. Provost** and **Dr. Ambrose M. Langa** has been re-elected secretary of the staff.

Dr. E. Converse Peirce, Knoxville, has been elected vice-president of the Southern Thoracic Surgical Association.

Dr. Laurence Grossman, Nashville, will assume the presidency of the Nashville Academy of Medicine on January 10th. **Dr. Joseph M. Ivie**, Nashville, has been named president-elect of the Academy. Secretary-treasurer is **Dr. Tom Nesbitt** who succeeds **Dr. Douglas Riddell**. Elected to the Board were **Dr. Robert Finks** and **Dr. James Thomasson**.

Dr. C. David Scheibert, Nashville, addressed the Huntsville Journal Club, Huntsville, Alabama on December 12th. Topics discussed were "The Care of the Comatose Patient," "Closed and Compound Head Injuries," and "Cerebrovascular Accidents with Emphasis on Internal Carotid Artery Insufficiency."

Dr. R. Beverly Ray, Memphis, has been named president of the Baptist Hospital medical staff. Other medical staff officers are **Dr. Marcus J. Stewart**, vice-president; **Dr. Gordon L. Mathes**, secretary; and **Dr. Charles B. Olim** and **Dr. William P. Maury**, members-at-large.

Dr. Marion M. Young, Crossville, has been named health director for the six-county Upper Cumberland District.

Dr. E. E. Edwards, McKenzie, has been elected president of the McKenzie Chamber of Commerce.

Dr. B. M. Overholt has been re-elected chief of staff of St. Mary's Hospital. Other officers elected were **Dr. Floyd N. Bankston**, vice chief of staff, and **Dr. James P. Harmon**, secretary-treasurer. All are from Knoxville.

Dr. E. M. Kelman, Maryville, and **Dr. Daniel**

Beals, Knoxville, recently conducted a seminar in chemistry at a meeting of the Tennessee Society of Medical Technologists.

Dr. Charles Gillit is now associated with **Dr. J. Wesley Osborne** at Hendersonville.

Dr. Joe Hampton Henshaw, Sweetwater, has been admitted to Fellowship of the American College of Surgeons.

Dr. I. Frank Tullis, Memphis, chief of the Division of Medicine at the University of Tennessee College of Medicine, has been elected chairman-elect of the Section on Medicine of the Southern Medical Association.

Dr. Joseph W. Johnson, Jr., Chattanooga, was a recent guest speaker at the Catholic Business Women's dinner meeting. His subject was "Mental Health."

Dr. W. Gordon Doss has returned to Hendersonville where he will begin the practice of medicine and anesthesiology.

Dr. C. Windom Kimsey, Chattanooga, has been certified as a diplomate of the American Board of Radiology.

The Memphis Pediatric Society has elected the following officers: **Dr. Raphael N. Paul**, president succeeding **Dr. William Mason**; **Dr. Albert N. Jones**, vice-president; and **Dr. Fontaine S. Hill**, secretary-treasurer.

Dr. Guy C. Richardson, Bristol, recently attended a meeting in Washington for aviation medical examiners.

Dr. Alex B. Shipley, Knoxville, has been elected president of the Tennessee Public Health Association.

Dr. O. Horace Yarberry, Jr., Knoxville, has been appointed chief of anesthesia and inhalation therapy at Baptist Hospital.

Dr. Edwin E. Gray, Tullahoma, has been elected chief of staff of Coffee County Hospital. He succeeds **Dr. Clarence Farrar** of Manchester. Other officers are **Dr. Horace A. Farrar**, vice chief of staff and **Dr. L. G. Gardner**, secretary-treasurer.

Dr. H. H. Winters, formerly of Manchester, has moved to Monroe, Louisiana.

Newly elected officers to the medical staff of Morristown-Hamblen Hospital are: **Dr. Cecil F. Mynatt, Jr.**, chief of staff to succeed **Dr. James W. Richardson**; **Dr. P. M. Trusler**, vice chief of staff; and **Dr. Charles S. Scott**, secretary-treasurer. **Dr. Kemp Davis** has been named chief of the surgical service.

Two Memphis pathologists have been named diplomates of the American Board of Pathology. They are **Drs. James W. Geisler** of Baptist Hospital and **D. LaZelle Michaelis**.

Dr. Walter Hughes, Cleveland, left January 1 to take a position on the faculty of the University of Louisville, College of Medicine, Louisville, Ky.

Dr. Robert C. Robertson, Chattanooga, recently attended a meeting of the Society of Medical Consultants to the Armed Forces.

Dr. John J. Lentz, Nashville, was recently honored in an observance of the 40th anniversary of his taking over as director of the Davidson County Health Department.

Dr. William O. Green, Jackson, has been named a diplomate of the American Board of Pathology.

Dr. John Hamsher, Memphis, has been named president-elect of the Memphis branch of the Southeastern Section of the American Urological Association.

Dr. Luke L. Ellenburg, Greeneville, has been elected a Fellow of the American Academy of Pediatrics.

Dr. William S. Muse, Knoxville, has been re-elected as chief of staff at Presbyterian Hospital. Others re-elected are **Dr. Kenneth Shoemaker**, vice chief, and **Dr. R. H. Duncan, Jr.**, secretary.

Dr. Frank London, Knoxville, recently spoke on "Low Saturated Fat Diets" at the Knoxville Area Dietetic Association.

Dr. Felix G. Line, Knoxville, has been elected chief of staff of Children's Hospital. He succeeds **Dr. John Mohr**. **Dr. Joe Garcia** was chosen as vice chief of staff.

Dr. Joseph E. Acker, Jr., Knoxville, has been re-elected chief of staff at University Hospital.

Dr. Lawrence C. Lewis, Jr. has been elected president of the medical staff of St. Joseph Hospital, Memphis. He succeeds **Dr. James Collins**. Other officers are **Dr. Joseph C. Orman**, president-elect, and **Dr. Paul Drenning**, secretary.

The office of **Dr. Philip H. Livingston**, Chattanooga, formerly located at 907 James Building, has been moved to 111 Provident Building. **Dr. Livingston** recently addressed the Cleveland, Tennessee, Woman's Club. The title of his address was "Vignettes of Heart Disease."

Dr. Edward E. Reisman, Jr., Chattanooga, recently addressed the Chattanooga Chapter of Hadassah.

Dr. Edward F. Buchner, III, Chattanooga, announces the opening of his office for the practice of medicine in the Provident Life Building. He will practice internal medicine and cardiology.

Chattanooga physicians recently appearing on a TV program sponsored by the Health Council were: **Drs. John M. Higgason**, **Harry Jones**, **Stewart Auerbach** and **L. Spires Whitaker**.

Dr. Paul A. Green, Jr., Nashville, announced the opening of his office for the practice of obstetrics and gynecology.

Dr. James M. Phythyon, Nashville, has joined **Dr. Frank C. Womack, Jr.** in the practice of pathology.

Mail Box

FROM: The National Foundation
800 Second Avenue
New York 17, N. Y.
Contact: Al Burns
OXford 7-7700

PREPARED FOR: Journal of Tennessee State
Medical Association

FOR RELEASE AFTER JANUARY 1, 1961

NEW YORK, N. Y., Dec. 2, 1960—The state of Tennessee has been the principal beneficiary in the allocation of March of Dimes funds raised in the state over the past 23 years, it was disclosed today in a financial summary prepared by The National Foundation.

More than 71 cents of every dollar from Tennessee's March of Dimes has been put to use in aiding the state's disease victims and in research and education projects conducted by Tennessee institutions. Of the remaining 29 per cent accruing to the national headquarters, a considerable amount also has come back to Tennessee in shipments of polio vaccine and gamma globulin and in other nationwide services conducted by The National Foundation.

The summary covers the period since the first March of Dimes was held in January, 1938, and compares the net total of funds raised in the state with amounts made available to Tennessee through September 30, 1960.

In this period, Tennessee chapters of the March of Dimes organization raised a net total of \$8,814,244.29 at an average fund-raising cost of 7½ per cent. Of this amount, \$4,774,133.36 has been available to the county chapters in carrying out their extensive patient aid programs, including advances of \$1,163,574.78 from the national office to meet local emergency situations.

In addition, 76 grants totaling \$1,525,879.31 have been made in support of research and professional education projects at Tennessee institutions. Principal recipients of these grants have been Vanderbilt University, \$744,383.20; Meharry Medical College, \$703,778.96; The University of Tennessee, \$40,240.39; The Nashville School of Social Work, \$19,315.76; Baptist Memorial Hospital, Memphis, \$18,161.00.

Over and above the 71 per cent used by institutions and county chapters in the state, The National Foundation has financed within the state projects such as the historic field trials which proved the effectiveness of the Salk vaccine, epidemiological studies and scholarship or fellowship grants to Tennessee residents. National headquarters' expenditures for the vaccine trials in Tennessee amounted to \$79,262.81. In addition, the national office has sent into Tennessee \$113,407.88 worth of Salk vaccine and 110,652 cc's of gamma globulin in support of its polio prevention programs.

Two years ago, the National Foundation for

Infantile Paralysis changed its name to The National Foundation in expanding its areas of interest beyond polio to include birth defects and arthritis, using the scientific knowledge and experience gained in the fight against polio.

The New March of Dimes takes place throughout the month of January.

HISTORICAL NOTES

A portion of the Presidential Address of the Middle Tennessee Medical Association appears below as a matter of record for the Archives of Medicine in Tennessee.

The Middle Tennessee Medical Association*

Ben H. Marshall, M.D., Fayetteville, Tenn.

Gentlemen, this the 129th. Semi-annual Meeting of the Middle Tennessee Medical Association, in itself, is a significant milestone in medical history. This number represents a lot of meetings and signifies many years of continuous and uninterrupted effort on the part of the doctors of Middle Tennessee to promote high standards of medical ethics, professional fellowship, and to share medical knowledge.

During the past 24 years it has been my privilege to attend most of these meetings, and since you have been so generous to award me the top honor of this association, it creates within me an humble awesomeness because I now stand in the footsteps and the shadows of some very prominent and some very famous Middle Tennessee physicians. Gentlemen, I humbly and sincerely thank you.

According to Dr. W. K. Sheddan, in a sketch in the files of the Centennial History of the Tennessee State Medical Association, the first steps in the organization of this association were taken at a meeting held in the Gentleman's Parlor of the Maxwell House in Nashville, on the evening of September 20, 1894 (some 65 years ago). Those present at that meeting were: Doctors J. S. Cain, J. R. Buist, T. A. Atchinson, J. B. Lindsey, J. D. Plunket, W. L. Nichol, W. D. Haggard, Sr., A. M. Trawick, W. G. Douglas, George H. Price, Paul F. Eve, G. P. Ed-

*Read before the Middle Tennessee Medical Association meeting, Shelbyville, Tenn., May 21, 1959.

wards, Ross Dunn, W. C. Newman, W. D. Sumpter, J. A. Witherspoon, J. M. Bass, O. H. Wilson, T. B. Stevens, C. R. Atchison, J. H. Oney and Hugh Miller of Nashville, and Doctors J. B. Cowan of Tullahoma, W. C. Bilbro of Murfreesboro, C. A. Abernathy of Pulaski, W. A. H. Coop of Lawrenceburg, J. S. Nowlin of Shelbyville, and J. W. Ross of Clarksville, (of this group of 28 doctors, I believe only Doctor O. H. Wilson is still living).

The first regular meeting was held in the Senate Chamber in the Capitol in Nashville, on November 13, 1894. It was called to order by the chairman of the preliminary meeting, Dr. J. B. Cowan of Tullahoma, who then detailed the aims and objects of the meeting and asked all present to become members of the organization. A Committee on Organization reported in a Constitution and By-Laws that were unanimously accepted. The organization was to be known as the Middle Tennessee Medical Association. Its officers were to be a president, a vice president, and a secretary-treasurer. Meetings were to be held semi-annually. This Constitution remains today practically unchanged. The permanent officers for the ensuing six months were then elected as follows: Dr. J. B. Cowan, Tullahoma, president; Dr. Robert Pillow, vice-president; and Dr. Hugh R. Miller, Nashville, secretary-treasurer. Dr. Cowan, in his talk after his election as president, suggested that the association become a missionary organization in the interest of the up-bringing of organized medicine in the state, and that to accomplish this purpose it should hold its meetings in the various towns of the middle division of the state. These suggestions were accepted and it was accordingly voted to hold the second meeting at Columbia, Tenn. on the second Thursday in May, 1895. This practice has been continued throughout the years, and meetings have been held in Shelbyville, Pulaski, Lewisburg, Dickson, Springfield, Lebanon, McMinnville, Fayetteville, Clarksville, Franklin, Sparta, Centerville, Lawrenceburg, Winchester, Tullahoma, Bell Buckle, and Gallatin. At all these places an honest and determined effort was made to bring into its membership all of the local physicians and to encourage

County Medical Societies. The roll of membership of this association carries on it the names of most of the practicing physicians of Middle Tennessee at one time or another. Some of the records have been lost, but a few of the older men who are still living and who have graced this office are: Dr. Lucius E. Burch, Dr. Duncan Eve, Dr. O. N. Bryan, Dr. H. H. Shoulders, and Dr. Jack Witherspoon, all of Nashville; Dr. C. L. Goodrich of Fayetteville; Dr. J. R. Ray of Shelbyville; Dr. George C. Williamson of Columbia; Dr. B. H. Woodard of Spring Hill; and Dr. J. B. Black of Murfreesboro. Some of these distinguished gentlemen are with us here today and we welcome and greet you sincerely.* Quite a number of the younger and more recent past presidents, (and I am not quite certain whether I should classify Dr. Walter Johnson of Pulaski, Dr. Robert McCown of Fayetteville and Dr. Beverly Douglas of Nashville as the older or the younger) are also present, but time does not permit me to recognize each of you individually, but I do especially appreciate your presence.

In the early history of this society, Dr. Sheddan states, that the Middle Tennessee Association helped to increase the membership and added to the strength of our State Association. The objects of this Association have been the advancement of organized medicine, the promotion of high ethical standards, and the encouragement of the younger men in the profession. Discussions in this association have always been pointed and free, and criticism has been sharp and sometimes caustic but never personal or offensive. So much for a brief summary of the history of this society, it is so typically that of the over-all history of medicine, and doctors of medicine, I thought that it would be of interest to us all. — — — — —

*Former presidents in attendance included W. D. Jones, C. L. Goodrich, and J. E. Sloan of Fayetteville, B. H. Wordall of Spring Hill, A. L. Griffith of Elora, J. B. Black of Murfreesboro, Ogle Jones of Centerville, Wm. Owens of Pulaski, Geo. Smith of Winchester, and Albert Weinstein of Nashville.

BOOK REVIEW

Resuscitation of the Newborn Infant. Edited by Harold Abramson, M.D., Professor of Clinical Pediatrics, New York Medical College, New York. 274 pages. St. Louis: C. V. Mosby Co., 1960. Price \$10.00.

In 1956 the Special Committee on Infant Mortality of the County of New York published a report on resuscitation of the newborn infant. Widespread interest in this report prompted a more comprehensive discussion evolving the concept of resuscitation of newborn infants founded on sound physiologic and biologic values and in accordance with current knowledge of the respiratory difficulties of infants at birth. Perhaps the title is misleading in that resuscitation is not discussed merely in terms of the use of gases, drugs and mechanical methods for the initiation and maintenance of respiration at the time of birth of the baby, but as a total concept encompassing all influences which may possibly contribute to perinatal distress. As a matter of fact the major portion of the book deals with the subject of perinatal distress. Twenty-four members of the committee jointly contribute from the fields of pediatrics, obstetrics, anesthesiology, medicine, pharmacology, physiology, and pathology. The subject matter is dealt with quite concisely and comprehensively compiling what we know, what we don't know and what needs to be done. All contributors are well known in their respective fields, the book is clearly written, adequately illustrated with ample references. Altogether this brief work does quite well what it set out to do, and should expect a favorable reception.

Surgery in World War II, General Surgery. The Medical Department, United States Army, in World War II. Edited by Michael E. DeBakey, M.D. U.S. Government Printing Office, Division of Public Documents, Washington 25, D. C. Price \$4.25.

The source material of this report is a record of 3,154 patients with abdominal injuries treated by the surgeons of the 2nd Auxiliary Group in forward surgical installations. Beginning in the North African campaign and continuing through Sicily, Italy, and southern France, the surgeons of the theater were hard pressed by the need for surgical evidence to guide their daily work. Only command insistence and the habit of high surgical standards made possible the accumulation of data.

The data were analyzed overseas, immediately after they were collected. Statistically, as well as clinically, they were large enough to justify conclusions. Among these were the routine use of exteriorization or colostomy for all injuries of the colon and rectum; the routine drainage of Morison's pouch in all injuries of the liver; the selective use of the transdiaphragmatic approach in thoracoabdominal wounds; the dominance of whole blood over blood substitutes in the resusci-

tation picture; the selective rather than the routine use of morphine in combat injuries for the relief of pain. The evidence indicated that correctly timed surgery was itself a factor in resuscitation, the shock ward officer a basic integer of the operating team.

The data, reanalyzed later, in the more normal environment of the United States, when more sober thoughts were possible, gave a more complete understanding of the effects of time-lag before operation, of the effects of multi-visceral injuries, upon prognosis.

The first section of this volume deals with resuscitation in shock, with anesthesia, adjunct therapy, and the control of pain. The third section concerns colostomy and the techniques of closure. The second and major portion is the record of high caliber surgery in tents with mud floors.

No similar record of abdominal injuries analyzed in such detail exists in medicomilitary history. It is incentive reading for every military and civilian surgeon, for medical students, internes, and residents.

Surgery in World War II, Hand Surgery. (The Medical Department, United States Army in World War II.) Edited by Sterling Bunnell, M.D. U.S. Government Printing Office, Washington 25, D. C. Price \$3.75.

This book, edited by an outstanding authority and based upon approximately 89,000 wounds of the hand estimated to have occurred in World War II, tells the problems and surgical management involved with that experience in 447 pages.

In contrast, in the history of the War of the Rebellion, only 30 pages of the three (3) volumes of surgical text were devoted to hand injuries, including injuries of the wrist, although hand wounds accounted for about one-ninth (1/9) of recorded wounds. Only 300 lines were devoted to the subject in the two (2) surgical volumes in the History of the U. S. Army Medical Department in World War I.

The treatment of wounds of the hand was not satisfactory early in World War II. The pressure and devastating character of these casualties heretofore unexperienced, as well as national manpower requirements for the preservation of functional extremities in addition to life itself, compelled a searching reevaluation of practices and techniques.

The repair of wounded hands constitutes a composite problem. They must be cared for by surgeons whose attention is not limited to the separate specialties of plastic surgery, orthopedic surgery or neurosurgery, but who possess composite interests and abilities.

This volume tells the story of hand surgery in the Mediterranean and European Theaters of Operations and in the special hand centers in the United States.

To take full advantage of varying points of view, individual techniques, and the personal ingenuity which is needed in large measure in such

injuries, the experiences of the individual top-notch surgeons responsible for the overall program are recorded separately. New precedents were established and are discussed in detail: the position of function obtained by spring or elastic splints; application of new cover; repair of nerves and tendons; skeletal realignment; the position, transfer, or rebuilding of digits.

The clinical and administrative pattern is clearly set forth in this volume. Every surgeon who practices hand surgery as a specialty or who encounters hand injuries in his practice could profit by its perusal. It shows conclusively that the reconstruction of even badly crippled hands is a profitable undertaking, in which intelligent and expert attempts at salvage yield rich rewards.

ANNOUNCEMENTS

Plans Formulated for TSMA Annual Meeting

Many interesting events are planned for the 126th annual meeting of the Tennessee State Medical Association to be held in Chattanooga, April 9-12, 1961. The four-day meeting will open on Sunday and conclude on Wednesday. The Sunday session will be the meeting of the House of Delegates and the General Scientific program, specialty society meetings and committee meetings will be conducted on Monday, Tuesday and Wednesday, April 10-12. Scientific meetings will begin at 9:00 a.m. on Monday, April 10 and conclude at 12:00 noon on Wednesday, April 12th.

On Monday evening, April 10th, physicians and their wives may attend the President's Banquet in the Read House. A number of presentations and awards will be made at the dinner and the guest speaker will be a humorist, Edmund H. Harding of Washington, North Carolina. It is intended that the President's Banquet be one where all attending will have the opportunity to relax and have fun.

A new event will follow the completion of the banquet, when Papa John Gordy and his Dixie-landers will play for dancing.

On Tuesday evening, April 11, the various banquets will be held as conducted by the specialty societies, meeting in conjunction with TSMA. Specialty groups will meet on all four days during the meeting, dependent upon the selection of dates by the specialty societies.

The scientific program will feature presentations by six distinguished guest speakers. There will be medical motion pictures, symposia and panel discussions.

Commercial exhibits will be on display in the Read House, site of the 1961 annual meeting. The Arts and Craft Show, a popular feature sponsored by the Woman's Auxiliary to the Tennessee State Medical Association, will be repeated and this display will be in the Patten Hotel.

The Read House will be headquarters where

the main registration desk will be located. The House of Delegates is scheduled to meet in the Read House on Sunday, April 9th at 1:00 p.m. and again on Tuesday, April 11th at 9:00 a.m.

Awards will be made to the outstanding physician of the year and to Miss Brenda Lisle, Chattanooga, winner of the AMA's top award in the 11th National Science Fair-International. Also, winners of the health project contest will receive their awards.

Final arrangements and the official program of the annual meeting will be listed in the March issue of the Journal.

The IVth International Congress of Allergology

The IVth International Congress of Allergology will be held at the Hotel Commodore, New York City, October 15-20. Among the subjects to be presented are: Genetics in allergy; Acquired tolerance; Transplantation immunity; Drug hypersensitivity; Contact allergy; General mechanisms in allergy; Mechanisms of antibody fixation; Delayed hypersensitivity; Auto immune processes; Steroid therapy; New methods in allergy, etc.

The registration fee for regular members will be \$45.00. These fees will include the printed proceedings and admission to the receptions. For further information, contact Dr. William B. Sherman, 60 East 58th Street, New York, New York.

Medical College of Georgia

Two intensive post-graduate courses patterned for the practitioner are planned for February and March of 1961 at the Medical College of Georgia. Featured faculty will include Dr. Edgar A. Hines, Jr., vascular disease authority from the Mayo Clinic and Dr. Buford Word, Professor of Gynecology from the Medical College of Alabama.

"Management of your Patient with Vascular Disease" is scheduled for February 28, March 1, 2, and "Gynecology in General Practice" will be held March 21, 22 and 23. Each course is acceptable for 18 hours of credit by the American Academy of General Practice. Registration fee is \$50.00 for each session. Application may be made by contacting Dr. Claude Starr Wright, Director, Department of Continuing Education, Medical College of Georgia, Augusta.

Recently Licensed Physicians in Tennessee

Hale, Bobby D., Memphis
 Petri, Kenneth E., Little Rock, Ark.
 Wall, Hershel P., Murfreesboro
 Vasu, Cordell M., Grand Rapids, Michigan
 Law, David H., Nashville
 Snider, Ross A., Chattanooga
 Puckett, Jerry E., Smithville
 Reed, Edward W., Nashville
 Runyan, John W., Jr., Memphis
 Bradford, Samuel A., Jr., Knoxville
 Hicks, William M., Knoxville
 Mitchell, David P., San Antonio, Texas
 Bomar, Robert L., Jr., Nashville

Young, William C., Nashville
Adair, Ernest W., Portland
Chazen, Eric M., Nashville
Marney, Samuel R., Jr., Nashville
Walker, Andrew W., Hawaii
Cohen, Henry A., Nashville

1961 Schedule TSMA Postgraduate Program

"Some Aspects of Industrial Medicine for the Practicing Physician" Symposium Type of 4 hours duration (4-6 P.M.; Dinner 6 to 7; 7 to 9 P.M.)

Locations for presentations:

Paris	Feb. 22 (Wednesday)
Jackson	23 (Thursday)
Dyersburg	24 (Friday)
Gallatin	Mar. 7 (Tuesday)
Cookeville	8 (Wednesday)
Lawrenceburg	9 (Thursday)
Tullahoma	10 (Friday)
Cleveland	Mar. 19 (Wednesday)
Knoxville	20 (Thursday)
Johnson City	21 (Friday)

Annual Cardiovascular Seminar

This Seminar sponsored by the Northeast Florida Heart Association will be held at the Prudential Auditorium, Jacksonville, Florida, January 26, 27 and 28.

The participating physicians are the following: Dr. William Dock, Prof. Medicine, New York State University; Dr. Lewis Dexter, Asst. Prof., Harvard University Medical School; Dr. Milton Rosenbaum, Prof. and Chairman, Dept. of Psychiatry, Albert

Einstein College of Medicine; Dr. Richard Ebert, Prof. and Chairman, Dept. Medicine, University Arkansas School of Medicine.

Further details and programs may be obtained by writing the Northeast Florida Heart Association, Jacksonville, Fla.

**Postgraduate Day in Surgery—
Vanderbilt University School of Medicine**

A program on Practical Approaches to Common Orthopedic Office Problems is scheduled for March 16, 1961. Painful affections of the musculoskeletal system are responsible for a large percentage of visits by the patient to the physician's office. Many of these conditions are amenable to a positive program of conservative treatment. The subjects to be covered include cervical arthritis, bursitis, low back pain, painful feet and degenerative arthritis. In each instance the presentation will emphasize the salient features of diagnosis, and a plan of therapy will be given. Appropriate clinical material will be presented in demonstration form. The luncheon will offer a panel representing the medical and legal aspects of injury cases. The afternoon program will include discussion of the common problems of feet and legs in children, to include pes planus, metatarsus varus, femoral torsion, dysplasia of the hips and painful epiphyseal growth disturbances. The course is approved for 7 hours of Category I credit by the American Academy of General practice. Tuition is \$15.00 which includes the luncheon. For further information address the Department of Postgraduate Instruction, Vanderbilt University School of Medicine.

PLACEMENT SERVICE

The Placement Service of the Tennessee State Medical Association is designed to assist doctors and communities to get together. Further information and contacts on both physicians and communities are available from the Public Service Office, 112 Louise Avenue, Nashville 5, Tennessee.

Locations Wanted

A 30 year old married surgeon desires to locate in community of 15,000-25,000. Protestant. Graduate University of Tennessee. Will consider associate or assistant practice. Available July 1961. LW-335

A 33 year old married physician, Board eligible in neurosurgery, desires associate or assistant practice in Tennessee community of 100,000. Presbyterian. Graduate University of Madrid, Spain. Available immediately. LW-342

A 38 year old married physician desires assistant, associate or clinical practice in ob-gyn in east or middle Tennessee community of 30,000-150,000. Methodist. Graduate Vanderbilt University. Available immediately. LW-346

A 31 year old physician, married, desires to establish ob-gyn practice in west or middle Tennessee community of 30,000-150,000. Will consider clinical, associate or assistant practice. Methodist. Graduate of Vanderbilt University. Available July 1961. LW-366

A 28 year old married physician desires clinical, assistant or associate general practice location in Tennessee community of 5,000 or more. Presbyterian. Graduate University of Tennessee. Available immediately. LW-370

A 42 year old married physician desires group, partnership or private practice in radiology in east or middle Tennessee community. Diplomate of the American Board of Radiology. Protestant. Graduate University of Basel, Switzerland. Available immediately. LW-376

A 29 year old married physician would like to establish general practice with interest in OB with established GP in Tennessee community of 5,000 to 25,000. Methodist. Graduate Louisiana State University. Available July 1961. LW-378

A 30 year old married physician desires to establish general practice in Tennessee community of 5,000 or over. Will consider assistant or industrial practice. Methodist. Graduate of University of Tennessee. Available immediately. LW-380

A 28 year old married physician wishes to locate in Tennessee community of 50,000 or over. Board eligible in internal medicine. Will consider clinical, assistant, associate, industrial or institutional practice. Methodist. Graduate Duke University. Available July 1961. LW-387

A 28 year old married general practitioner desires to establish practice in east or middle Tennessee community of 30,000 or less. Will consider clinical, assistant or associate practice. Protestant. Graduate University of Tennessee. Available July 1961. LW-392

Physicians Wanted

Physician in west Tennessee town of 500,000 desires an associate, age 28-35, for internal medicine practice. Office space and some equipment provided. PW-126

Physician in east Tennessee town of 30,000 desires an associate general practitioner and surgeon. Office space and some equipment provided. PW-127

Northeast Tennessee community with trade area of 3,000 desires general practitioner. Nearest hospital 16 miles. Office space available. Near large recreational area. PW-129

Southern Tennessee community of 1,000 desires general practitioner to replace physician leaving to join hospital group in another community. Office space available. Good location. PW-131

West Tennessee town of 500,000 in need of an eye, ear, nose and throat specialist to buy office equipment, reasonable terms, of former physician who is deceased. PW-135

Small southern Tennessee community in need of general practitioner to replace retiring M.D. Nearest hospital 15 miles. Close to large missile base. Large trade area. Good location. PW-142

Clinic in east Tennessee community of 30,000 has opening for Internist, Board eligible, who is primarily interested in advantage of a congenial group practice. Pleasant associates, good location. Newly constructed and fully equipped. PW-143

Physician in middle Tennessee town of 200,000 desires associate or independent internist or GP. Office space and equipment provided. PW-146

Small southern Tennessee community of 1,200 with trade area of 20,000, desires general practitioner. Two other physicians in community. Office space and housing readily available. PW-151

Southeastern community of 10,000 in need of general practitioner. Office space available with six months rent free. Eighteen miles from larger city. Good location. PW-154

Large clinic in large middle Tennessee town in need of general practitioner with residency training. Excellent location, good working conditions, and congenial group. PW-156

The production of hypothermia by cooling the blood in a heart-lung membrane by-pass is relatively simple, but is successful in open heart surgery.

Clinical Experience with Membrane Lung Used in Conjunction with Hypothermia*

E. CONVERSE PEIRCE, II, M.D., WILLIAM K. ROGERS, M.D.,
C. HARWELL DABBS, M.D., FREEMAN L. RAWSON, M.D., Knoxville, Tenn.

Hypothermia and Low Flow Perfusion

By using perfusion hypothermia in conjunction with a heart-lung, extracorporeal flow rates may be sharply reduced and the apparatus markedly simplified. Decreasing the patient's temperature to 30 C. reduces metabolic needs to about one-half, while a reduction to 20 C. reduces them to about one-quarter. Temperatures of organs are reduced in proportion to their blood flow. Temperature falls more rapidly in organs of

high metabolic rate, thus producing a maximum saving for the degree of heat exchange employed.^{9,10} We call this type of refrigeration "differential cooling" (Fig. 1). Its use approximately doubles the oxygen saving produced by any given amount of heat exchange. This is graphically illustrated in figure 2.

There are numerous practical advantages which accrue from the joint use of hypothermia and the extracorporeal heart-lung:

1. Reduction of flow to 25% of normal greatly simplifies cannulation.
2. During hypothermia all events take place in slow motion. Problems that occur are never as difficult as they would be at normal temperature.
3. The reduced flow leads to a proportional reduction in the flow through pulmonary shunts, simplifying intracardiac suction.
4. Because of the general slowing of physiologic events, total circulatory arrest can be carried out for progressively longer periods as hypothermia is deepened.¹² This is extremely valuable where inflow occlusion is impossible.²

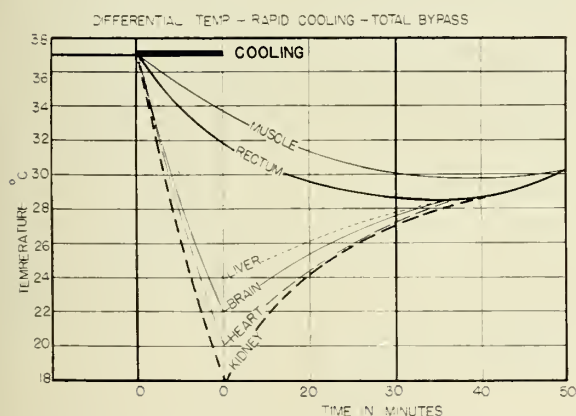


FIG. 1. During 10 minutes of total by-pass cooling, high flow rate organs are more rapidly cooled than muscle. This "differential" cooling produces a much greater oxygen saving than would be the case if uniform cooling were employed.

*From the University of Tennessee Memorial Research Center and Hospital and the Acuff Clinic, Knoxville, Tenn. Supported in part by U. S. Public Health Service Grant No. H-2315, the East Tennessee Heart Association and the Acuff Clinic Foundation. Presented before the Southern Thoracic Surgical Association, Nassau, Bahamas, November 17, 1960.

The Membrane Lung

The membrane lung^{3,8} has two unique advantages. First, it provides distinct blood and gas phases, and a relatively constant volume, so monitoring is greatly simplified (Fig. 3). Except for the replacement of lost blood, the only regulation required is adjustment of a reservoir on the venous line to control venous pressure.⁶ Second, there

DIFFERENTIAL COOLING ON TOTAL BYPASS AT 30cc PER KILOGRAM

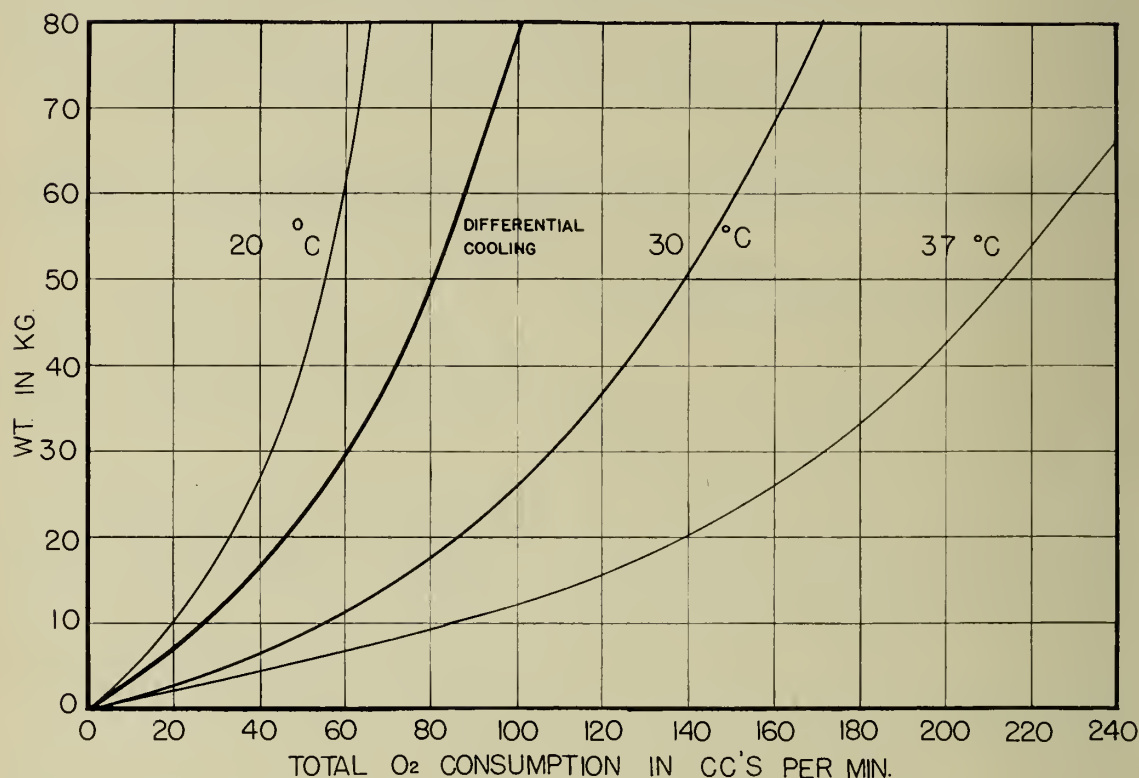


FIG. 2. "Differential" cooling requires approximately the same heat exchange that is necessary

to reduce the average temperature to 30°C., but provides nearly twice the metabolic saving.

0.5 MIL TEFLON—SMALL MEMBRANE LUNG—37 °C
OUTLET PRESSURE 25 mm Hg

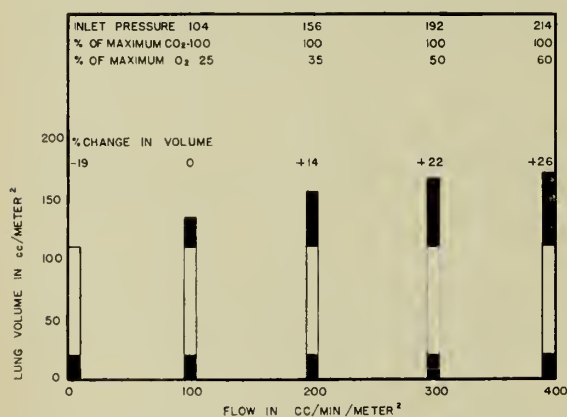


FIG. 3. Lung volume comprises blood in the distributing channels, blood enclosed between the membranes when there is no flow, and blood which varies with the flow rate. For $\frac{1}{2}$ mil. Teflon, and balanced lung function, a flow of 100 cc. per square meter of Teflon membrane is advised. At the recommended flow, a 10% increase or decrease results in about 1.5% volume change. There is relatively little change in volume when flow is increased from 100 cc. per minute per square meter to 400 cc. per minute per square meter.

is probably decreased blood denaturation. Scott¹¹ has shown that after two hours of

perfusion with a lung that has a raw blood-gas interface, embolic fat can be found regularly in the brain, kidneys, and other organs. Similar experiments with the membrane lung have failed to reveal any evidence of fat emboli. In addition to these special features, the membrane lung, contrary to the picture given by Glenn,¹ can be a simple apparatus that is easy to use. One of the arrangements we use is illustrated in figure 4.

Special Features

(1) *Advisable degree of cooling.* Using blood flows of 30 to 40 cc. per kg., the arterial blood should reach the vicinity of 10°C. within a few minutes of the start of perfusion. Ten to fifteen minutes of such cooling on total by-pass will reduce metabolism sufficiently for surgical procedures of 30 to 40 minutes.^{9,10} For circulatory arrest, the preliminary cold perfusion should be about as long as the contemplated arrest.

(2) *Circulatory arrest.* Circulatory arrest, when necessary, can be performed

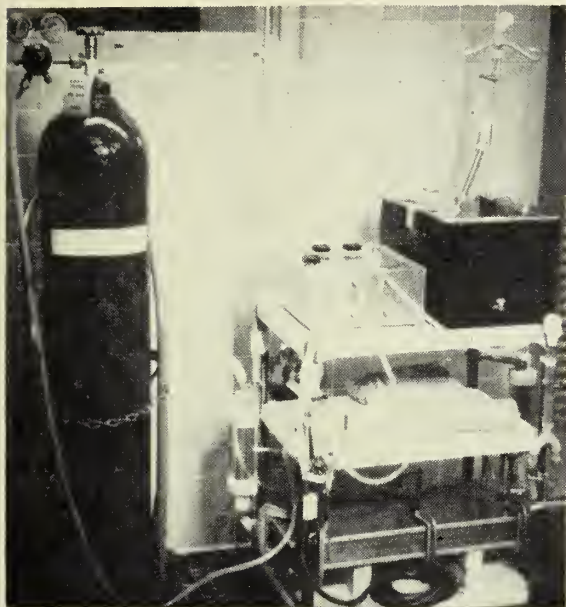


FIG. 4. Apparatus for emergency cardiopulmonary by-pass is illustrated. This is entirely portable. Pumps are activated by compressed oxygen which also supplies the lung. The readily cleaned heat exchanger consists of two opposing stainless steel plates, separated by a thin gasket. The venous reservoir is used for priming, venous pressure control, and control of flow. There is no free blood-gas interspace in the circuit, and the maximum volume change is approximately 300 cc. Emergency cannulation can be accomplished in about 10 minutes.

with relative safety, but metabolic studies indicate that it is undesirable whenever some perfusion can be maintained. There

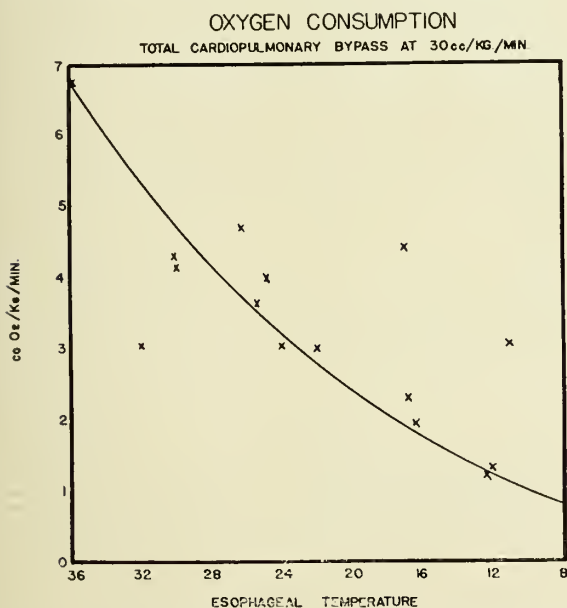


FIG. 5. When esophageal temperature is plotted against oxygen consumption there is considerable individual variation. At 10°C., oxygen consumption is about 1/7 of that at 37°C. This permits prolonged circulatory arrest without death, but since metabolic needs continue, it is not without significant metabolic abnormality.

appears to be little present justification for using this technic as a routine procedure. Figure 5 correlates oxygen consumption with esophageal temperature. The need for oxygen is reduced but is not eliminated by reducing the esophageal temperature to 10 or 12 C. Figure 6 shows the degree of

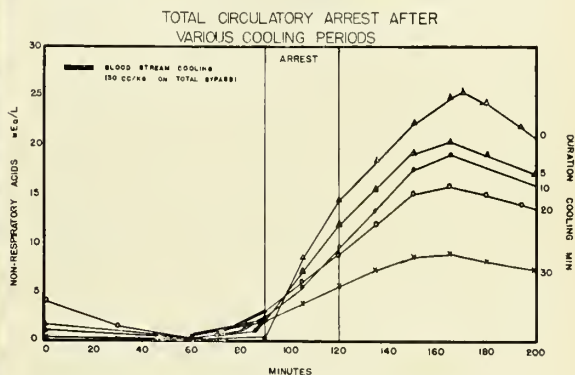


FIG. 6. In circulatory arrest, the degree of "metabolic acidosis" (nonrespiratory acidosis) is directly dependent on the degree of preliminary cooling. Inadequate cooling periods may produce very severe acidosis.

"metabolic acidosis" produced by arrest after varying periods of cooling. Numerous studies have indicated that the development of "metabolic acidosis" is well-correlated with circulatory decompensation. Only minor metabolic abnormalities are observed during hypothermia with adequate flow. It is apparent that the lower the temperature at the time of arrest the better the procedure will be tolerated from a metabolic or circulatory standpoint.

Where circulatory arrest is practiced, a few special precautions are suggested:

- (a) The venous pressure should be maintained at a slightly positive level during the arrest to prevent air from entering the venous system.
- (b) Adequate reservoir space should be provided in the extracorporeal circuit for blood that will drain from the patient.
- (c) After resumption of circulation it is suggested that warming be delayed for 10 to 15 minutes to permit reopening of closed capillary beds.
- (d) Warming should be carried out slowly.

(3) *Warming procedures.* For patients in good condition, with no depression of myo-

cardial function, and with normal blood volume, rapid warming of the blood stream is apparently a safe procedure. Where the patient's condition is not known, where there has been a period of cardioplegia, or where the blood volume may not be properly adjusted, rapid warming may be very dangerous.⁷ Metabolic needs may outrun the ability of the circulation to supply them. It is, therefore, our custom not to return patients to their normal body temperature by the perfusion. They are returned to a temperature between 30 and 32°C. which is sufficient for maintenance of respiration and circulation. From this level of hypothermia, slow self-warming appears very satisfactory.⁷

(4) *Acid base problems.*

(a) "Metabolic acidosis" may be expected whenever the perfusion rate is inadequate to supply the metabolic needs of the patient and is thus an index of circulatory adequacy. We have previously discussed the problem of monitoring "metabolic acidosis," and we believe that this should be done in all but the most routine clinical perfusions.^{5,7} Determination of the buffer base or the eucapnic pH (the pH at $p\text{CO}_2$ of 40 mm. Hg.) will disclose the degree of "metabolic acidosis." No correction of acidosis by antacids is required as long as the pH is reasonably compensated, but a progressive rise in "metabolic acids" indicates circulatory inadequacy and has a poor prognosis unless circulation can be improved.

(b) Respiratory acidosis is a special problem that may arise with the membrane lung during prolonged perfusion, especially if there is some degree of metabolic acidosis. The limiting feature of the membrane lung is its ability to eliminate carbon dioxide. Whenever acidosis occurs during perfusion with a membrane lung, hyperventilation is not possible, and other means of correcting the abnormality must be sought. For-

tunately, the pH rises about 15/100's of a unit for each degree centigrade of hypothermia, and some respiratory acidosis may actually be desirable in hypothermic perfusion. We do not recommend special measures to combat acidosis unless the pH falls below 7.25 at the temperature of the patient. Sodium bicarbonate is unsatisfactory without hyperventilation for it results in an increase in total carbon dioxide and, consequently, an increase in $p\text{CO}_2$. THAM,* on the other hand, accepts hydrogen ions from carbonic acid, as well as other acids, and so can simultaneously correct a mixed metabolic and respiratory acidosis.⁴

(5) *Ventricular fibrillation.* This arrhythmia must be anticipated so one will be prepared to deal with it properly. It is particularly prone to occur following interruption of the coronary circulation. When it occurs, unless the heart is vented, it is imperative that caval occlusions be released and venous pressure be within normal limits to prevent pulmonary edema. Before attempts are made at reversion, adequate coronary perfusion should be re-established, temperature should be raised to 26°C. or higher, and severe pH abnormalities should be reduced, but not over-corrected. Reversion can be carried out chemically or with electric shock and we have preferred the latter. In the case of the hypertrophied heart of aortic stenosis, reversion may not be possible without increasing the defibrillating voltage considerably. When 130 volts have been insufficient, intravenous quinidine has been given to reduce cardiac irritability. In one instance, fibrillation persisted for more than two hours before reversion, yet the re-established heart beat was entirely effective. In a second instance, after reversion with the help of quinidine, a pacemaker was required and was entirely satisfactory despite the hypothermia.

Applications of Heart-Lung

Basically, the extracorporeal heart-lung may be useful in any circumstance where

*Tris (hydroxymethyl) aminomethane (Abbott).

temporary partial substitution is needed for either the heart or the lung. At the present time, the major use is in open heart surgery. It will not be surprising if other uses gradually increase until they exceed open heart applications (Table 1). The case reports

Table 1		
MEMBRANE LUNG PERFUSIONS		
With Hypothermia		
Open heart surgery		8
With total arrest	1	
Emergency resuscitation		3
Coronary occlusion	2	
“Toxic shock”	1	
Great vessel surgery		2
With total arrest	1	
Without Hypothermia		
For osteomyelitis		2
For carcinoma		13

following are chosen to give some idea of the future potential of these combined technics. The apparatus has been used for periods up to 4 hours and 16 minutes with survival. Arrest has been successfully used for 48 minutes. There have been no deaths in good risk patients.

Case Reports

Case 1. Routine, good risk, open heart surgery.

A 6 year old white boy was admitted for correction of a symptomatic congenital aortic stenosis, confirmed by direct measurements of ventricular and femoral artery pressures. The aortic valve gradient was 80 mm. of mercury.

A 6 square meter membrane-lung was used for the cardiopulmonary by-pass. The heart was readily exposed through a vertical, sternal splitting incision, and the cavae were isolated. The left femoral artery and vein, and the superior vena cava were cannulated. Cooling to 26°C. was carried out on total by-pass at a flow of 700 cc. per minute. The aorta was clamped distally and opened proximally. A tricuspid valve with fusion of two commissures was found. Both commissures were widely opened with scissors and the aortic incision was then closed with care to displace any trapped air. On removal of the aortic clamp, normal sinus rhythm was spontaneously re-established within a short time. Ventricular fibrillation did not occur. There did not appear to be any significant depression of myocardial function. Figure 7 illustrates the conduct of the case. There were no bleeding problems and no antacids were required since the “metabolic acidosis” was mini-

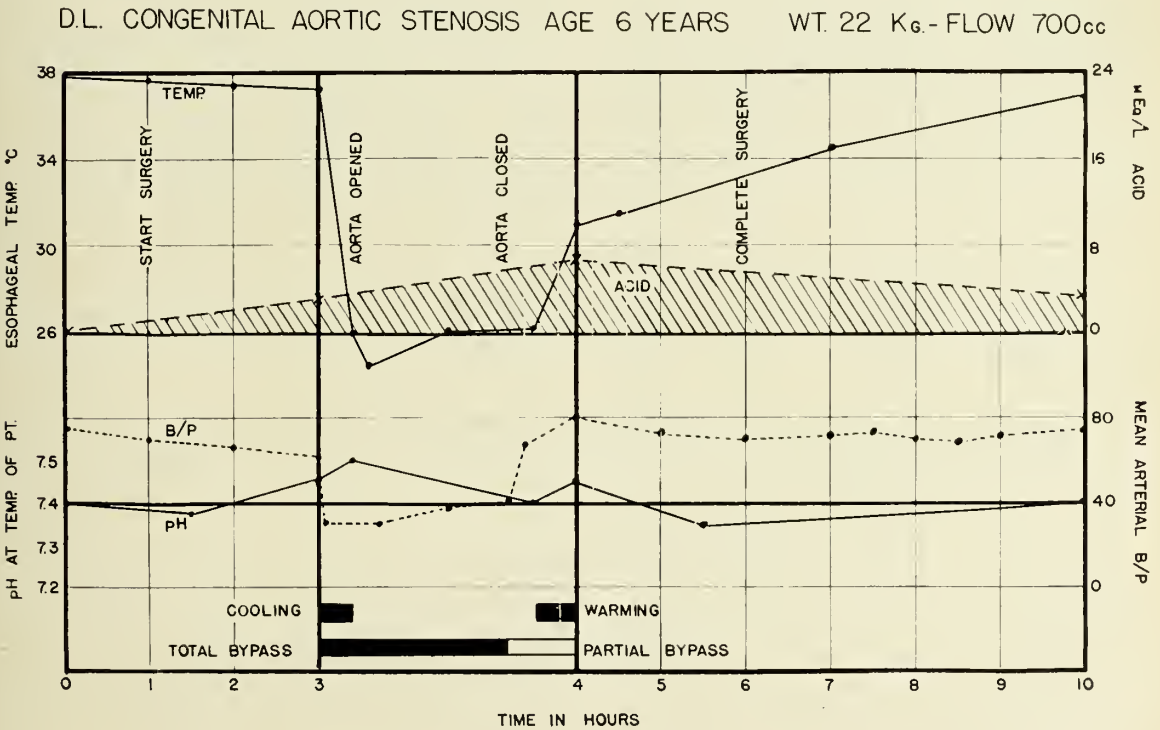


FIG. 7. In aortic stenosis, rapid blood stream cooling is used both to permit a decreased perfusion rate and also to provide hypothermic cardioplegia. For this reason the aorta is not clamped and opened until the cold perfusion is finished. After closure of the aorta, a relatively brief period of re-warming on partial by-pass is carried out. The use of hypothermia produces little prolongation

of the surgery. Note that a moderate metabolic acidosis develops, but is progressively corrected. The pH remains close to normal. The arterial blood pressure falls abruptly when cooling is initiated on total by-pass at low flow, but promptly rises to normal when total by-pass is discontinued.

mal, well-compensated throughout, and rapidly corrected by the patient.

Comment. Where coronary perfusion can be readily maintained during intracardiac surgery, the cardiectomy may be performed at the time by-pass cooling is instituted. In aortic valve disease, coronary perfusion must be interrupted when the aorta is opened, and the cardiac surgery is therefore delayed until the hypothermia is sufficiently deep to provide good cardiac protection. This method of cardioplegia makes coronary perfusion unnecessary and is especially well adapted to the treatment of aortic stenosis. The total operative time is prolonged over normothermic procedures only by the short interval required for re-warming, which, in this instance, amounted to ten minutes.

Case 2. Acute coronary occlusion with ventricular fibrillation.

A 49 year old white man was seen at his home for acute chest pain and sent by ambulance to the hospital. He insisted on walking into the Emergency Room where ventricular fibrillation suddenly occurred. Immediate thoracotomy was carried out, positive pressure respiration and cardiac massage were instituted, but defibrillation was unsuccessful. Cardiac massage was continued while the left femoral artery and vein were cannulated, and a perfusion at 500 to 700 cc. per minute was started, using a heart-lung containing five square meters of 0.5 ml. Teflon membrane. Cooling was carried out to 28° C. with resumption of spontaneous respiration and marked improvement in the color of the blood and general appearance of the patient. Defibrillation was then accomplished with a single electric shock. Forty-five mEq. of sodium bicarbonate was given for a severe "metabolic acidosis." The perfusion was continued for a total period of about one hour. Cardiac rhythm was regular and blood pressure was maintained at 100 mm. of mercury systolic or better when the perfusion was terminated. Slow self-warming was permitted to take place to provide additional hypothermic protection. Within 5 hours the patient was alert, talking rationally, and was co-operative; however, on the first postoperative day, severe oliguria was noted. On the third postoperative day, respirations became labored and it was apparent that the patient was developing pulmonary edema. Despite the use of positive pressure respiration, death occurred on the fourth postoperative day as a result of pulmonary edema. Positive findings at autopsy were limited to a recent, small, posterior, myocardial infarction with focal arteriosclerotic narrowing of the right coronary artery without complete occlusion. Little arteriosclerosis was noted elsewhere. There was no evidence of fat embolus.

Comment. It is believed that a more so-

phisticated management of the water and electrolyte problem resulting from the acute renal depression might have led to recovery of this patient. Hypothermic perfusion, as a method of attacking difficult problems of resuscitation, offers much promise and its use should be extended. This case certainly demonstrates the possibility of resuscitation after death from acute myocardial infarction and suggests that it may soon be possible to deal definitively with coronary occlusions in such instances.

Case 3. Isolated pelvic perfusion for carcinoma of the cervix.

A 33 year old white nulliparous woman was admitted for treatment of recurrent carcinoma of the cervix. One year before, a diagnosis of squamous cell carcinoma of the cervix, International Stage II, was made elsewhere, and she received external irradiation and intracavitary radium. The patient was well until she developed pain in the left hip. Examination showed a cervical mass from which a positive biopsy was obtained. There was extension of the mass into the rectovaginal septum and laterally to the left pelvic wall. It was thought that no additional radiation could be given and that the only possible treatment for this International Stage III lesion was pelvic perfusion.

Pelvic perfusion was carried out using the right iliofemoral vessels, the cava and aorta being occluded by tapes inserted through a right flank incision. A membrane lung containing 5 sq. M. of 0.5 ml. Teflon membrane was employed. The perfusion was at the rate of 450 cc. per minute. Only 3 pints of blood were required. Pelvic isolation and blood volume in the external circuit were readily maintained. Phenyl alanine mustard was directly injected into the arterial line (100 mg. in 20 cc. of propylene glycol). At the end of one hour, one pint of blood was drained from the pelvis into the external circuit and the perfusion was discontinued.

Comment. The use of the membrane lung permits simpler conduct of regional perfusion than is possible with oxygenators having a raw blood-gas interface. In pelvic perfusion, oxygenation can be well-maintained at normal temperature with as little as 3 sq. M. of 0.5 ml. Teflon. With care, priming blood can be reduced to about one pint. We have had no complications directly referable to the perfusions.

Summary

Extracorporeal flow rates can be sharply reduced, and apparatus simplified by the use of refrigeration. Direct cooling of the blood results in cooling of the organ proportional

to blood flow and, hence, maximum saving of oxygen. Because of the lower flow and the relaxation of time restrictions, refrigeration greatly simplifies technical problems that may confront the surgeon during open heart surgery.

The membrane lung has a relatively constant volume and requires almost no monitoring or regulation. It is also probable that the membrane lung produces less blood denaturation than oxygenators with a raw blood-gas interface.

The joint use of hypothermia and the membrane lung not only provides an excellent means for performing open heart surgery, but simplifies emergency heart-lung applications, adjunct surgical use of extracorporeal circulation, and regional perfusion. The control of cooling, circulatory arrest, warming, acid-base abnormalities, ventricular fibrillation, and cardiac standstill are discussed. Case reports are presented to illustrate various applications.

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It seems reasonable to believe that the answer to the cure of cancer will lie in the field of chemotherapy—a means of affecting intracellular enzyme systems.

Recent Advances in Cancer Chemotherapy*

Malcolm R. Lewis, M.D., Nashville, Tenn.

The era of cancer chemotherapy opened about 15 years ago when it was found that nitrogen mustard caused a definite regression in animal tumors. Since that time a considerable number of other alkylating agents have been developed and the field of antimetabolites has grown and expanded. At present it cannot be said that any permanent cures have been achieved solely by means of drugs. However, the range of palliation obtainable with drugs is ever widening, and palliation is, in many areas, becoming more effective. This is true both because of the development of new agents, and because of increasingly potent methods of delivery of the drugs. It has long been expected in research circles that the ultimate "break-through" in cancer may come in the form of an all-powerful "pill." Recently, considerably more weight has been given to improved methods of delivery using agents, which in themselves have too small a therapeutic margin selectively to kill all cancer cells safely.

The earliest efforts to overcome this narrow therapeutic margin were attempts to concentrate drugs at the tumor site. Initially this consisted of the injection of nitrogen mustard into the artery supplying a tumor, with occlusion of the venous outflow to prolong the drug effect. This often resulted in severe bone marrow depression as well as arterial thrombosis. About three years ago Creech and his associates¹ conceived of isolating the blood supply to a region invaded by tumor and perfusing this isolated area with chemotherapeutic agents using an extracorporeal circuit similar to that used in open heart surgery. In this technic, the arterial inflow to a region is temporarily occluded as in the venous outflow, and the area thus isolated from the general circulation is

artificially supplied by a pump-oxygenator circuit containing blood with a high concentration of a chosen agent. Because the major portion of the patient's total bone marrow lies outside the circuit and therefore is not exposed to the toxic effects of the drug, it is possible to achieve average drug concentrations of 10 to 20 times that which can be achieved by intravenous administration alone.

This technic has fulfilled its original promise of markedly improved palliation over that obtained by earlier concentration efforts. It has been estimated that approximately 75% of patients so treated have had some degree of regression of their tumors.² This has amounted in some cases to complete disappearance of grossly visible tumor in the treated area, and has often resulted in complete relief of pain in patients with extensive invasion by cancer in such regions as the pelvis.

Regardless of the care employed in preventing spillover into the general circulation of the agents thus used, serious marrow depression continues to occur in some patients. Because of this constant threat Hattiboglu³ developed the idea of using chemical antagonists to nitrogen mustard as protection to the bone marrow. When the segmental circuit is established and ready for administration of the chemical agent of choice, an infusion of the agent's chemical antagonist is begun in the general circulation. Thus, any drug spilled over is inactivated by the already present antagonist. The chosen chemical antagonist for nitrogen mustard is thiosulfate and early reports indicate that the margin of safety is considerably improved by its use.

However, a basic deficiency to this general type of anticancer chemotherapy has been pointed out. The malignant cells most sensitive to this type of treatment are those in active mitosis at the time of administration

*From the Department of Surgery, Vanderbilt University School of Medicine, Nashville, Tenn.

of the drug. Even in rapidly growing tumors only a fraction of cells undergo division during the half hour that is usually required for perfusion. In efforts to attack definitively a larger portion of the total tumor mass, Sullivan, Miller and Sikes,⁴ and others have developed a technic for prolonged safe administration of agents ordinarily too toxic for sustained use. This investigator has implanted a plastic catheter in the artery supplying a tumor and maintained a constant slow infusion of the antimetabolite methotrexate at the same time the metabolite, citrovorum factor, is administered intramuscularly in dosages adequate to protect sensitive organs. The therapeutic effect in this instance is obtained by virtue of the high differential concentration of agent present in the tumor site. Because it is released virtually in the tumor itself, there is little dilution of the agent during its first passage through the tumor. Thus it is in much higher concentration here than is the antagonist, yet an adequate concentration of antagonist is maintained at distant sites such as in the bone marrow. Because this therapy is maintained for periods of several weeks, it is possible to exert an effect on a much higher percentage of cells during the mitotic phase. The rationale of this prolonged type of administration is similar to that of employing oral agents such as Cytosan but has the advantage of greater concentration at the tumor-site made possible by the use of an antagonist. It is still too early to evaluate the results of this type of treatment, but it is believed to offer promise not previously realized with short-term therapy.

Simultaneous with the foregoing efforts to improve chemotherapy have been attempts to render the tumor itself more susceptible to the effects of chemical agents. It has been well established that well oxygenated tissues are more susceptible to the effects of x-ray treatment and, because the alkylating group of anticancer agents is radiomimetic in behavior, it has been inferred that the effect here would also be enhanced by thorough oxygenation of the tumor. For this reason an oxygenator is used in conjunction with the pump to circulate chemical agents through tumor-bearing regions in segmental perfusion.

It has been known for some time that colchicine has the effect of arresting cells in mitosis, and for that reason it has been employed to "sensitize" tumors to the effect of anticancer agents. When used systemically in this manner, colchicine does not discriminate between malignant and normal tissue with regard to mitotic arrest, however, and it is thought that smaller doses of alkylating agents should be used in conjunction with it. Should it become possible to localize the effects of colchicine to the tumor bearing region, considerable advantage may be gained by its use.

A further very ingenious use of drugs in the adjuvant treatment of cancer has been under sustained investigation for a number of years. Cole and associates,⁵ expressed serious concern a number of years ago over the viable cancer cells found circulating in the blood of patients undergoing resection of presumably curable tumors. Because resection of many tumors resulted in a discouragingly low cure rate due to distant metastasis, efforts were directed toward these circulating cells. A regimen was devised whereby the patient was given intravenous nitrogen mustard in sites most likely to have trapped malignant cells. Thus, after resection of a colon or stomach cancer, nitrogen mustard was administered into the portal vein at operation and into the peripheral vein on subsequent days. Patients having breast cancer were treated with injection into peripheral veins as this would first reach the lungs as one of the most probable sites of metastasis. The longest established series of such patients is those with breast carcinoma and early results in these are quite encouraging.⁶ In the group treated in this manner at the time of radical mastectomy there are approximately twice as many patients free of disease up to three years later as in the untreated group.

Summary

In addition to the continuing development of new chemical agents, a number of new methods of drug administration have been devised and show considerable promise. Segmental perfusion has been and is being improved, adjuvant chemotherapy at the time of definitive resection of tumors shows good results in early reports; efforts to

“prime” or “sensitize” tumors to agents may prove successful; and prolonged infusion of therapeutic agents in large doses with simultaneous protection of the bone marrow appears to be one of the most rational and potentially successful modes of delivery thus devised.

2118 West End Ave.

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E. VINCENT ASKEY, M.D.

President

American Medical Association

will address the TSMA membership at
the annual meeting in Chattanooga on April 10

The present status of the use and wearing of contact lenses is reviewed with discussion of the several types and their indications.

Contact Lenses*

WILLIAM F. MURRAH, JR., M.D., Memphis, Tenn.

The recent public interest in, and acceptance of the corneal microlens has reached startling proportions as compared to a decade ago. At that time, and prior to that the prescribing of a contact lens for a patient was an occasional affair, whereas today patients wearing contact lenses are becoming a major problem in eye care.

What is a contact lens? A contact lens is a lens, plastic or glass, worn in contact with the front of the eyeball; it may be in contact with the cornea alone, or vault the cornea and touch the sclera alone.

The most common use of contact lenses has been the correction of refractive errors, generally of more than 1.5 diopters and principally for myopic individuals. Other indications for the use of contact lenses are:

- (1) As a vocational aid to vision,
- (2) As the most practical device which will give useful vision in certain eye conditions,
- (3) As a valuable aid in vision where the wearing of spectacles seems impractical or impossible,
- (4) For cosmetic appearance to cover corneal scars or other defects on the anterior surface of the eyeball,
- (5) As a protective device against harmful fluids, gases or solids, and
- (6) Others, including neurotic conditions associated with eye defects and as a mechanical aid in the treatment of several pathologic conditions.

A brief history of contact lenses dates back approximately 70 years to the year 1887, when a European oculist, Dr. Sae-misch, had under his care a patient with one blind eye and the other eye threatened with blindness as a result of a cancerous growth on the lid. He thought that if a thin glass protective covering could be

made for this eye it could be protected. He obtained the help of F. A. Muller, an expert glass blower in Wiesbaden, who was a skillful maker of artificial eyes; he blew a lens to fit over the right cornea of this patient, forming a protective covering. It was a thin glass shell like an artificial eye with a transparent corneal portion. The patient wore this for twenty years.

That same year Dr. Fick, of Zurich, Switzerland, experimented with contacts as a refractive device, and it was he who first used the term contact lens.

During the next few years lack of proper design made all contact lenses produced in this early developmental period unbearable for wear for any length of time, and the idea of contact lenses was abandoned for a number of years. Several men, Muller, Kalt, Sulzer and others had attempted blown and ground contact lenses.

In 1930, the Zeiss Company offered a trial set of scleral contact lenses, which had 39 lenses with different scleral curvature and corneal curvature.

In 1936, the Carl Zeiss Company announced they were prepared to make glass contact lenses from individual casts of eyes. Previous to that time this was not being done. This period had many "headaches" and disappointments but it enabled future developments to profit from the mistakes of that era.

In 1937, Feinbloom, an optometrist in New York developed and experimented with a Semi-Plastic Contact lens which had a glass center and a molded plastic scleral portion, but it proved unsatisfactory.

In the same year the Kollmorgen Optical Company produced and sold its first contact lenses; they were ground polished glass and were similar to the Zeiss type. They also produced the molded glass type. All these lenses during this era had been the scleral type of glass contact lenses.

*Read at the meeting of the Tennessee Academy of Ophthalmology and Otolaryngology, April 11, 1960, Nashville, Tenn.

The era of plastic lenses began in 1938, and by 1940 the process of producing an all plastic contact lens had been radically changed and improved. These were made of synthetic acrylic resin—polymethylmethacrylate. The plastic contact lens was practically unbreakable under normal conditions and would not break in the eye but, of course, it could be broken with a hammer or if stepped on. It was lighter than glass and optically clear but would scratch easier than glass. At present almost all contact lenses of today are made of plastic.

The history of the corneal contact lens dates back prior to 1948, but there was little if any practical use of this type of contact lens during the first half of the twentieth century. The advent of the Tuohy lens, in 1948 really started the clinical use of corneal contacts. Wearers could get 4 to 6 hours of wearing time, and about 30% of the patients were satisfied. The Tuohy lens was 11.4 to 12 mm. in diameter, larger than the so-called microlens which was 9.5 mm. in diameter and was produced in 1954. About 50% of the patients who tried this lens were successful in this and could wear it up to 8 hours.

The following year a corneal contour lens, devised by Norman Bier of England, found even greater acceptance, and the wearing time with 80% of patients able to wear the lens averaged longer than 8 hours.

The physiologic optics of a contact lens before the human eye is briefly this. A new optical refractive surface is placed against the cornea of the subject's eye so rays of light from an observed object are refracted from the surface of this contact lens rather than the cornea behind the contact lens. The cornea produces about 75% of the refractive power of the eye. By altering the radius of curvature of the thin corneal contact lens, an increase or decrease in the refractive power of the eye is obtained. For example, a sharp retinal image may be produced in the myopic eye, which needs to have its equivalent power reduced by substituting a new refractive anterior surface. A contact corneal lens with a greater radius of curvature or flatter surface anteriorly than the present corneal surface, reduces the refractive power of the eye and gives a longer image focus which

would move the focus posteriorly from the vitreous and onto the retina.

Types of Contact Lenses

There are basically two types of contact lenses in use today.

I. The Scleral Contact Lens, a haptic lens of which there are two types.

(a) Conventional or fluid containing lens.

(b) "Lacrilens" (Trade name for fenestrated scleral lens made by Obrig).

II. The Corneal Contact Lens or Microlens.

Generally speaking, by far the greater majority of contact lenses being prescribed today are of the corneal type, since the scleral type is being reserved primarily for use by individuals in sports, instances of keratoconus, and eyes with high astigmatism which are unable to wear corneal lenses.

Scleral Contact Lens. The *conventional lens* is a large haptic lens that rests on the sclera of the eye. The fluid is artificial and must be trapped behind the lens when it is inserted. Maximum wearing time is 3 or 4 hours before the cornea begins to become edematous and cloudy and the patient sees halos and rainbows around lights. Except for patients with keratoconus, the only place it is desirable is for football, basketball, or competitive swimming where the patient only wishes to wear them during the short time he is competing. Its advantages are: relative ease of fitting, short period of adaptation, less susceptible to external irritants, good while swimming, preferable with corneal disease, relatively unbreakable, and protects against foreign bodies. Its main disadvantage is the progressive corneal clouding and edema which cause hazy, foggy vision, haloes around lights and irritation of the eye, which reduces the practical wearing time and, also, the fact that it may become scratched at times.

The *Lacrilens* is virtually the same lens as the conventional one but has a fenestration below which permits the wearer to utilize his own tears. Both this and the conventional lens are custom made, molded lenses. An impression of the anterior surface of the eyeball is made with a type of

Table I
CORNEAL CONTACT LENS SURVEY

Corneal Contact Lens Survey	Memphis Optical Dispensary Survey		San Francisco Bay Area Survey*	
	Patients	Percent	Patients	Percent
Total patients	591		613	
Wearing contacts	550	93	553	90.3
Not wearing contacts	41	7	60	9.7
Age—less than 20—	280	47	91	14.8
20-30	200	34	234	38.2
30-45	94	16	183	29.8
45-60	17	3	78	12.7
Male	130	22	163	26.6
Female	461	78	452	73.4
Hyperopia	59	10	17	3
Myopia	532	90	498	80
Hours per day of wearing contacts				
less than 4	35	6	26	4.2
4-8	95	16	103	16.8
8-12	242	41	109	17.8
over 12	219	37	318	52.0
Reason for wearing				
Medical (monocular aphakia)	18	3.5	121	19.8
Social	574	95	492	80.2
Sports	9	1.5		
Aphakia—monocular	13		53	
binocular	5		18	
Wearing contacts with myopia (diopters)				
less than 1	6	1.1	4	.6
1-3	260	49	95	13.3
3-5	181	34	184	27.2
more than 5	85	15.9	200	31.2
Astigmatism (diopters)				
less than 1	409	69	338	55
1-3	143	24.2	128	20.5
3-5	31	5.3	15	2.4
more than 5	8	1.5	7	1.1
Reason for not wearing contacts				
Irritation	23		31	5
Spectacle blur			8	1.3
Technic	6		14	2.2
Lost, broken	8		10	1.6
Abrasion			1	.1
Other	4		2	.3
Wearing with Hyperopia of (diopters)				
less than 1	12	20		
1-3	17	29		
3-5	30	51		
over 5				

*Westsmith, Richard A.: Am. J. Ophth. 46:869, 1958.

molding plastic under topical anesthesia. The lens is molded over the positive impression. The Lacrilens is much more difficult to fit since a tolerance of only 0.25 mm. is permitted before the capillary attraction is broken and the tears drain from the corneal section. Its chief advantage is the fact that it does not touch the cornea as the corneal lens does, and that the patient can usually get up to 8 hours of continuous wearing if he desires; rarely do corneal clouding and edema develop and the only solution required is a wetting agent. Other advantages are similar to the conventional scleral contact lens which contains fluid. The dis-

advantages are that a long and difficult fitting period is required, and if one or both lenses are lost reduplication is difficult.

Corneal Contact Lens (Microlens). At the present time all corneal lenses are the same for all practical purposes. Each manufacturer has a different trade name and makes various claims for this lens. The only difference in the lenses manufactured by the several companies is in the thickness and edge treatment. The lenses vary in diameter from 8.7 to 10 mm. The size will be determined by the patient's eye, thickness of the lens, and the width of the peripheral curves. The thickness of the

lens varies from 0.15 to 0.4 mm. The thickness is determined by the refractive power incorporated in the lens. The width of the peripheral curve of the lens is determined by the diameter of the lens. The optical portion is usually from 6.0 to 7.5 mm. in diameter, and the balance of the total diameter of the lens is peripheral curve. Therefore a 7.0 mm. optical on a 9.0 diameter lens would leave a peripheral curve of 2.0 mm., while the same optical portion on a 9.5 mm. lens would have a peripheral curve of 2.5 mm. The peripheral curve or curves and the diameter of the lens control the interchange of tears behind the lens.

In the last two years the contact lens department of the Memphis Optical Dispensary has fitted about 35 of the scleral type of lens as against 1000 of the corneal type lenses.

What has been the acceptance of the corneal microlens? From the results of two surveys of the acceptance of the microlens which appears below, this type of lens has

been highly successful. One survey was reported by Westsmith (Am. J. Ophth., Dec., 1958), which was taken by a survey of wearers of contact lenses in the San Francisco Bay area. About 1300 letters were sent out of which over 600 were answered, and these findings along with those of a survey of wearers of contact lenses fitted by Jim Gray, O.D., the contact lens technician of the Memphis Optical Dispensary, are given. The patients who had contact lenses fitted by Mr. Gray were those sent to the Memphis Optical Dispensary by prescribing ophthalmologists in Memphis and surrounding areas. The Memphis Optical Dispensary series consists of 590 wearers of contact lenses who have been fitted with the lenses during the past two years and whose progress has been followed. It is believed this gives a fairly complete survey of how wearers of contact lenses in this area compare with those in the San Francisco Bay area. (Tables 1 and 2.)

Table 2

SCLERAL LENS SURVEY (MEMPHIS OPTICLE DISPENSARY)				Total
Classification	Patients	Percent		
Age in years	less than 20	14	40	Lacrilenses - 29
	20-30	12	34	Conventional - 6
	30-45	7	20	—
	45-60	2	6	35 Total
	over 60			
Sex	Male	29	83	
	Female	6	17	
Reason for contacts	Medical	5	14.3	
	Social	7	20	
	Sports	23	65.7	
Hours per day of wearing contacts	less than 4	6	17.1	
	4-8	22	62.9	
	8-12	7	20	
	over 12	0		
Percent of week wearing contacts	less than 10	2	5.7	
	10-50	12	34.3	
	50-75	10	28.6	
	over 75	11	31.4	
Wearing contacts with myopia of (diopters)	less than 1	1	3.6	
	1-3	5	18	
	3-5	12	43	
	over 5	10	35.4	
Keratoconus		4		
Aphakia	monocular	1		
	binocular			
Myopia		28	80	
Astigmatism (diopters)	less than 1	18	51.5	
	1-3	7	20	
	3-5	6	17	
	over 5	4	11.5	
Wearing with hyperopia of (diopters)	less than 1	1	14	
	1-3	3	43	
	3-5	0	43	
	over 5	3		
Hyperopia		7	20	

Summary

1. According to the above surveys, approximately 90% of the patients fitted with corneal contact lenses are wearing them.

2. Well over half of these patients are under 30 years of age.

3. The ratio of female to male is 3 to 1.

4. Myopic individuals with more than 3 diopters of myopia comprise by far the majority of the lenses fitted. Hyperopic persons wearing contact lens form only a small percentage of wearers of corneal contact lenses and these usually have a high degree of hyperopia.

5. Approximately 70% of wearers of corneal contact lenses wear their lenses 8 hours or more per day.

6. Irritation has been the primary cause of inability to wear contact lens.

7. The scleral type of contact lens, either the Lacrilens or the conventional fluid lens, is being worn by practically all of the individuals who have had them fitted and whose course has been followed. Generally, they do not wear them nearly as much of the time as the corneal contact wearers. The reasons for wearing this type of lens is only 20% for social reasons as against 90% with the corneal contact lens. Males predominate 4 to 1 in using this type of lens. Sports are the major reason for wearing this type of lens, with nearly two-thirds of the wearers using the lens for that purpose. The Lacrilens predominates 5 to 1 as the choice over the fluid containing lens.

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CASE REPORT

Retrosternal Placement of Colon for Esophageal Substitute

William Robert Fowler M.D., Chattanooga, Tenn.

It has been recognized for many years that various procedures employed for esophageal reconstruction are unsatisfactory. Esophageal reconstruction, or replacement, is particularly needed in various types of benign obstructive esophageal lesions. Because benign obstructive esophageal lesions, such as lye stricture, are relatively uncommon, an evaluation of reconstruction technics by any one group is necessarily small. I believe that a short discussion of some of the technics used and report of a successful case with a four-year follow-up is worthwhile.

Several procedures have been utilized in esophageal replacement.

(1) Mobilization of the stomach into the chest with esophagogastrostomy: The chief disadvantage of this technic is that frequently there is gastric regurgitation into the esophagus with subsequent peptic esophagitis. When this technic is used in infants, the stomach impinges on the pulmonary reserve, which is poorly tolerated.

(2) The jejunal segment: Mobilization of a long segment of jejunum with adequate blood supply is a very difficult problem. In addition, the usual nutritional problems accompanying total gastrectomy are present because the stomach is by-passed. Peptic ulceration of the susceptible jejunum precludes successful gastrojejunostomy.

(3) Anterior chest wall skin tubes: Various skin tubes on the anterior chest wall have been devised to by-pass the esophagus, but generally these have been totally unsatisfactory due to the difficulty in maintaining patency of the tubes. The cosmetic result is poor and the psychologic aspect of this type substitute is unsatisfactory.

The problem of a suitable prosthesis then appears to be primarily one of finding a segment of bowel that can be mobilized with adequate blood supply and still is not very susceptible to peptic acid digestion of the gastric juices. The colon most nearly meets these requirements. It has been shown both experimentally and clinically that long

segments of colon may be mobilized without seriously impairing the blood supply as long as the marginal artery is preserved. The colon is definitely less susceptible to peptic ulceration than is the small bowel.

Use of the colon for esophageal replacement has been reported in infants with esophageal atresia. Sherman and associates¹ point out that many children over the country who have a cervical esophagostomy and gastronomy could have restoration of intestinal continuity by this procedure. Undoubtedly there are also many benign esophageal strictures secondary to ingestion of lye which are still being dilated by bougies in which a suitable transplant would be indicated. The following is a case report of a benign esophageal stricture with description of the technic of successful repair and four-year follow-up.

Case Report

B.M.W., a 40 year old colored man, first entered the Erlanger Hospital emergency room in December, 1955 approximately three or four hours after swallowing an undetermined amount of lye in a suicide attempt.

Physical examination revealed a slightly undernourished Negro man in acute distress, bringing up copious quantities of blood and mucus, and complaining of severe substernal pain. B.P. was 100/70, P. 92, T. 100.4 and R. 24. There was some erythema and edema of the pharyngeal mucosa, otherwise the examination was essentially negative.

Laboratory Studies. Hgb. 13.8 Gm. WBC count 18,300, with a differential of 17 stabs., 69 segs., and 14 lymphs. Urinalysis was negative.

Course in Hospital. The patient was admitted and treated with intravenous fluids antibiotics, analgesics and sedatives. The temperature rose to 102° F., P. 104 and R. 30, and WBC. count 23,400 during the next week of hospitalization. On the 4th hospital day the patient was placed on liquids which he tolerated well and quickly progressed to a soft diet. On the 13th hospital day esophagoscopy was performed which revealed esophageal stricture in the upper esophagus. Dilatation by bougie and esophagoscopy to the cardia of the stomach was carried out. Barium swallow the following day revealed a patent esophagus. He was dismissed from the hospital.

During the next 4 months there was gradual onset and progression of obstructive symptoms of the esophagus, and at the end of this time the patient could only swallow liquids. There had been a 30 pound weight loss. The patient was again admitted to the hospital, and esophagoscopy revealed a stricture beginning just below the pharynx and extending throughout the length of



FIG. 1. Stricture of the distal esophagus and dilation of proximal esophagus.

esophagus. (Fig. 1.) During the next 4 months dilatation by bougie of the esophagus was carried out on ten different occasions. However, obstruction recurred quickly and it was decided that esophagosplasty was indicated.

The patient was again admitted to Erlanger Hospital in July, 1956 and after dilatation by bougie was placed on a high protein, high calorie diet with multivitamins, iron, and supplemental feedings. The bowel was prepared with phthalyl-sulfathiazole (Sulfathaladine), neomycin and saline cathartics.

Technic of Operation. Under general endotracheal anesthesia the skin was prepared from

the neck to the pubis. The abdomen was opened through a right paramedian skin incision extending from well up on the xyphoid process to the lower abdomen. The right colon was then mobilized as for a right hemicolectomy, preserving the middle colic and marginal vessels. Appendectomy was performed. The ileum was divided just proximal to the ileocecal valve and the distal ileum was inverted as one would invert a duodenal stump. The transverse colon was divided just distal to the main supply of the middle colic artery and an end to end ileotransverse colostomy was performed in the usual manner. The defect in the mesentery was closed. (Fig. 2.)

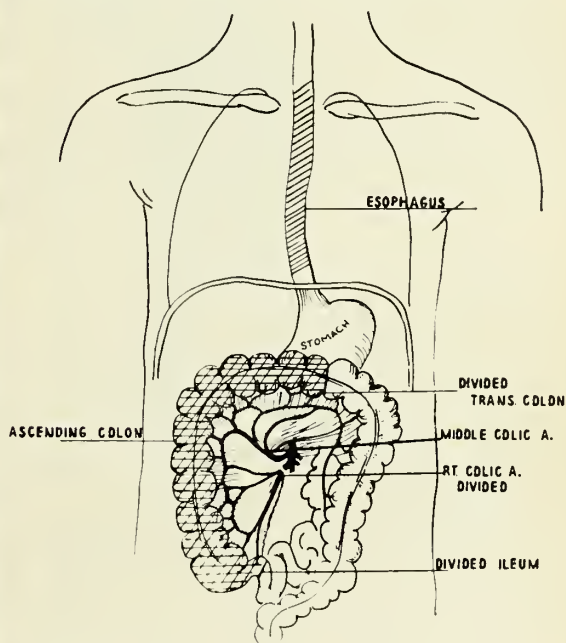


FIG. 2. Portion of right colon and transverse colon to be placed in the chest.

At this point the formation of a substernal tunnel, just posterior to the sternum in the anterior mediastinum, was begun employing finger dissection from below. The mediastinal pleura was reflected from the sternum. A low collar incision in the neck was made and the upper skin flap was elevated. The strap muscles on the left were clamped, cut and retracted, and a subtotal thyroidectomy was performed on the left side in the usual manner. The cervical esophagus was then exposed. The mediastinal pleura was then reflected from above away from the posterior surface of the sternum by finger dissection, aided by using a small malleable retractor in the midportion of the sternum where the fingers would not meet, thus completing the formation of a tunnel in the anterior mediastinum. (Fig. 3.) The cecum was then tested for viability and circulation and color were found to be good. The cecum was then pulled up through the substernal tunnel into the neck without difficulty by using a heavy suture attached to the end of the malleable retractor. An end-to-side coloesophagostomy was performed

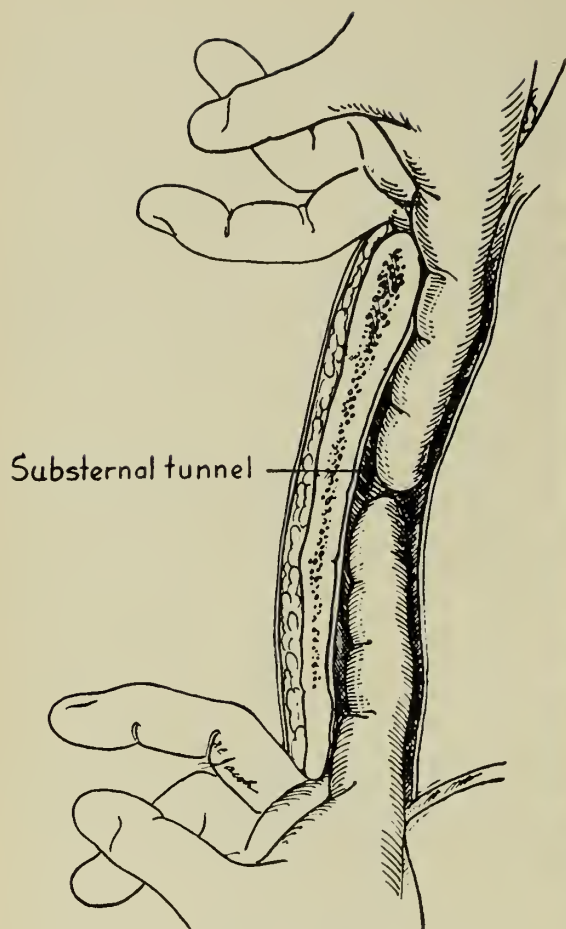


FIG. 3. Formation of substernal tunnel.

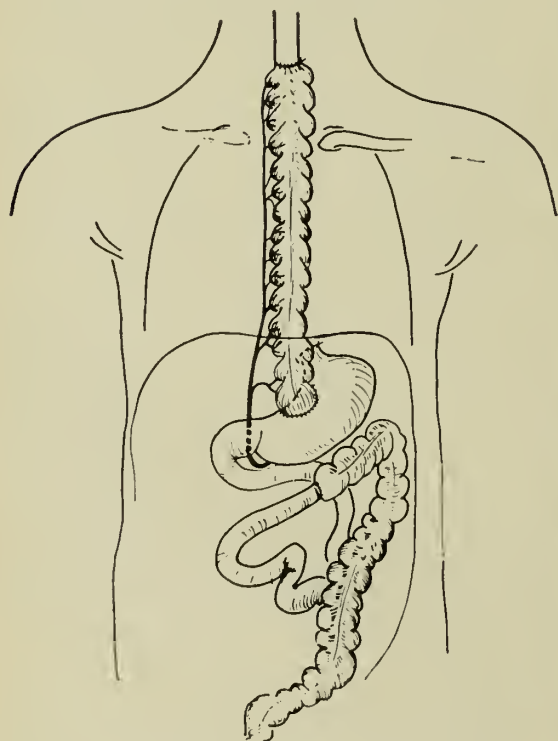


FIG. 4. Colon in place in the neck.

using interrupted fine silk sutures. The distal strictured esophagus was not removed. The transverse colon was then anastomosed to the anterior wall of the antral portion of the stomach, thus restoring the intestinal continuity in one stage. (Fig. 4.) A Stamm gastrostomy was performed

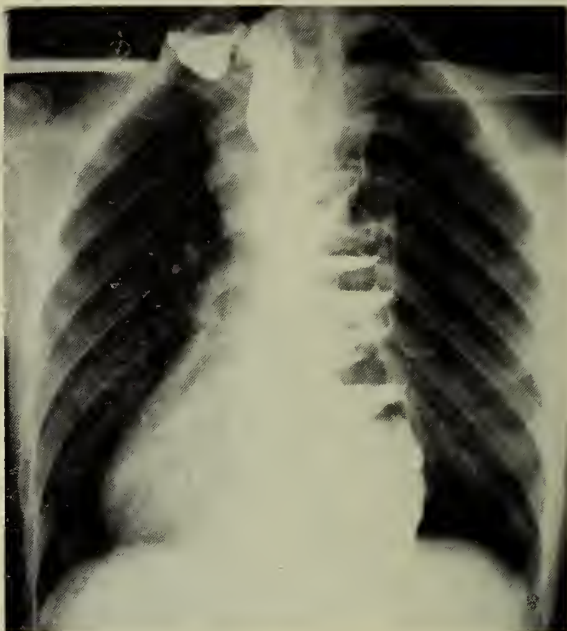


FIG. 5. Recent barium swallow.

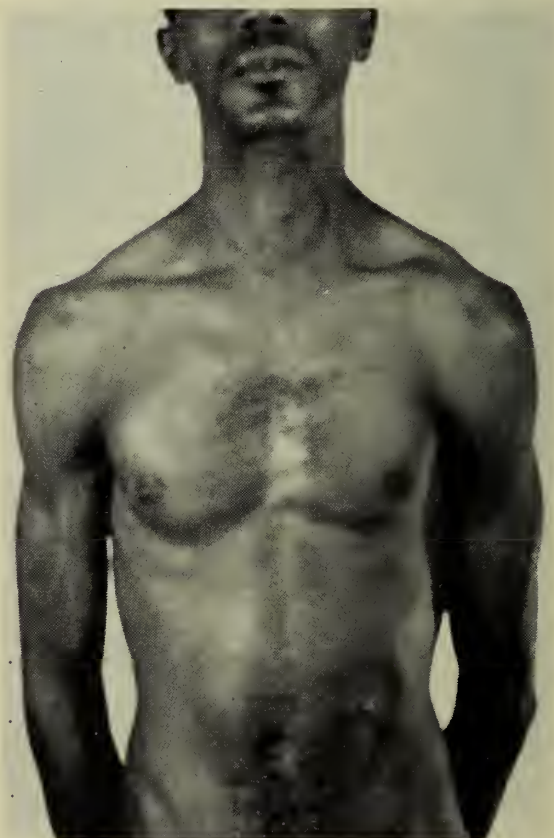


FIG. 6. Recent photograph of patient shows no enlargement in the neck.

for postoperative feeding purposes. The neck was drained with a small rubber tissue drain. The neck incision and abdominal incision were closed. The patient tolerated the three and one-half hour procedure without difficulty. An immediate postoperative chest x-ray film was made to rule out a pneumothorax.

Postoperative Course. The patient was treated with broad spectrum antibiotics. Gastrostomy feedings of neurosurgical formula were started on the third postoperative day and were tolerated well. Oral feedings of liquids were started on the 5th postoperative day and supplemented with gastrostomy feedings of high protein, high caloric nature. Solid foods were well tolerated by the 8th postoperative day and the gastrostomy tube removed. The patient progressed rapidly and gained 25 lbs. during the next few months.

When last seen (July 1, 1960), 4 years following operation, the patient was asymptomatic and his eating habits were normal. (Figs. 5 and 6.)

Summary

1. The problem of esophageal reconstruction is discussed and some of the various procedures that have been employed are listed and discussed briefly.

2. The rationale of the use of the colon as a prosthesis is discussed.

3. Substernal coloesophagogastrostomy can be performed in one stage. The substernal tunnel obviates open thoracotomy which is an important factor, particularly in small children.

4. A successful case of substernal coloesophagogastrostomy is presented.

5. The colon, in my opinion, nearly approaches the long sought after objectives in esophageal reconstruction than any other procedure heretofore utilized.

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President's Page



RALPH O. RYCHENER,
M.D.

During the past year, an intensive probing into the affairs of the pharmaceutical industry has been conducted, yet no disclosure of any wrong doing has been proven. The record of the investigation stands as proof that the industry has served the public in an efficient and faithful manner.

Front pages of our newspapers and other communications media have revealed the charges and counter-charges of the Senate's investigative committee, as well as some timely rebuttals by the pharmaceutical industry. As has been true from time to time in other fields, the progress in drug technology has outpaced the ability of society to assimilate its goods. The foundations of discovery, resting as they do on such industry pillars as patents, licensing, research, profits and the rest are dimly realized, if at all.

If there is one great lesson of the 1960 Senate investigation and all the satellite movements inspired by it, it is that the professional politician has always recognized the impatience of Americans with the past. He spots instinctively where an institution has neglected to court public understanding with each forward move, thus leaving understanding trailing in the race to progress. The atmosphere created by the committee seems likely to delay the introduction of new and perhaps life-saving drugs.

Considering the close attention of the press and public to these investigative proceedings, never had a Congressional inquiry been handed a finer opportunity to launch a public crusade and mobilize national resources to stamp out criminal operatives in the health field.

Had the Subcommittee majority and staff been disposed to deal with those who are indeed bent solely on profits and indifferent to the suffering of the poor, the aged and infirm, they could have performed a genuine public service. They would have discovered that a huge \$100 million is spent each year by unsuspecting people on quack cancer cures. In addition, \$750 million is spent on quack cures of all kinds. Co-existing in our society with legitimate medical care is a growing quasi-medical underworld which grosses each year from its victims a sum equal to one third to one half the annual sales of legitimate manufacturers of ethical drug products. The committee work has been a masterpiece of propaganda technique. The hearings resulted in sensational headlines, statements that modern drugs are often fakes; that they are sold by untruthful advertising; that they cost too much and that the drug industry should be more strictly regulated.

This whole attack upon the pharmaceutical industry is only one of the many areas where medicine and physicians are involved. We face a year of continuing changes in possible economic upheavals which we can, and must face together.

Ralph O. Rychener, M.D.

President

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Address papers, discussions and scientific matter to R. H.
Kampmeier, M.D., Editor and Secretary, 8210 Vanderbilt
University Hospital, Nashville 12, Tennessee
Address organizational matters to Jack E. Ballentine,
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R. H. KAMPMEIER, M.D., Editor and Secretary
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FEBRUARY, 1961

EDITORIAL

ANTICOAGULATION—HOW LONG?

The treatment of coronary thrombosis has been modified during the past ten years by the employment of agents to prolong the coagulability of the blood. The evidence that Dicumarol, and Coumadin, and other similar preparations, are of benefit to an individual who has suffered acute coronary thrombosis seems to weigh heavily in suggesting their routine employment. There are some contraindications, of course; namely, the presence of some area of disease apart from the heart, which might favor overt hemorrhage, such as a duodenal ulcer, or an hemorrhagic diathesis. Naturally the drug should not be used if laboratory facilities or experience of the physician, in charge of the case, limits proper supervisory ability. On the other hand, the question as to how promptly the prothrombin time should be reduced, how prolonged it should be maintained, and for how many weeks, months, or

years, the drug should be continued, has resulted in many different opinions.

Indeed the thought has been emphasized that even the careful physician experienced in clinical cardiology, employing accepted laboratory help, such as the electrocardiogram, and serum transaminase data, may not be completely accurate in his diagnostic approach. Copeci and Levy¹ studied the records of 100 patients who came to autopsy following the clinical diagnosis of acute myocardial infarction. Included only were the patients who lived more than 24 hours after admission and who had been thought by the clinician to have been treated adequately. Fifty of the patients had been treated with heparin and Dicumarol and 50 received comparable treatment, but no anticoagulants.

Immediately apparent was a diagnostic error of 20% in the untreated group, and 17% in the group treated with anticoagulation. This margin of error has been reported by others—19% at the Barnes Hospital, Washington University, St. Louis;² and 56% error at the Royal Infirmary of Edinburgh.³ In this latter study the records of 1075 patients diagnosed clinically as having myocardial infarction were analyzed in the light of subsequent post-mortem findings. There were 247 deaths, a mortality of 24% and 217 autopsies performed. In 96 of these the diagnosis was incorrect. Mistaken for myocardial infarction were instances of pleural effusion, heart failure, cerebral vascular accidents, post-operative shock, pulmonary embolism, dissecting aortic aneurysm, pericarditis, and systemic lupus. These statistics are disquieting, and give all something to think about.

In addition to the diagnostic errors revealed by autopsy surveys, major hemorrhage was encountered as a cause of death in 3 of 100 in one series and myocardial rupture was found three times as often in the patients under anticoagulant therapy as in the patients not receiving anticoagulants.

From Toronto, Canada⁴ comes an interesting report of observations, of 50 patients treated with Dicumarol, for an average of one year. No difference could be found in the clinical course of these 50 patients treated with Dicumarol, as compared to 50 patients treated in a comparable fashion,

except that Dicumarol was not employed. Dicumarol did not protect from sudden death or repeated infarction. They concluded that prolonged anticoagulant therapy was not established as a desirable procedure.

Other reports are more favorable. Manchester,⁵ in studying comparable series of 200 patients treated with anticoagulant and 200 with ascorbic acid, as a control, found subsequent myocardial infarction three times more common in the ascorbic acid treated group. He reported the mortality, in the anticoagulated, during a ten year period, to be about 12% of the ascorbic acid treated group.

In the British Medical Research Council report,⁶ the mortality of the anticoagulant group was lower in the first few months of treatment, but this protection was not apparent during the second and third years of the study.

In all surveys it is to be remembered that 15% of all patients surviving the acute phase of myocardial infarction die during the next twelve months. After this first year a ten year survival rate of 50% has been reported in many series long before anticoagulant therapy was introduced.

If we are dealing with a disorder where the accuracy of diagnosis, even in the best of hand, is subject to an error of 20 to 50%, and if under ordinary treatment, not including anticoagulants, a ten year survival of 50% may be found, we can conclude that the final decision relative to the long-term employment of anticoagulants in the treatment of acute myocardial infarction, has not been written.

This problem is quite apart from the long-term use of anticoagulants in the treatment of thrombophlebitis, and in patients with frequent episodes of angina pectoris.

Albert Weinstein

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WHITE HOUSE CONFERENCE ON AGING

This is now history. It was a privilege to have been a delegate and to have had an opportunity to see such a large body of people in action.

Though its purpose has been publicized, some recapitulation may be in order in the words of Congressman Fogarty (Rhode Island—D) who, as Chairman of the Subcommittee on Labor and HEW of the Committee on Appropriations of the House, introduced the White House Conference on Aging Bill on Jan. 8, 1958. (The date of the Conference was set by law to be three years later.) He commented on the many bills introduced in Congress dealing with the aged and retirement, but with little positive legislation or understanding of the immensity of the problems and failure to accept responsibility. Rep. Fogarty¹ then stated his belief for the need of the application of the White House Conference technic, as used in the past, to focus attention on the problems of the aging. He said, "Five basic areas demanded attention . . . employment, income, housing, free time, and health. It has long been my conviction that the responsibility for meeting these challenges was primarily that of the communities and the States, and that the Federal Government should stand ready to work jointly with them and their citizens toward a common goal. Further, it has been my conviction that any recommendation or action must allow the older person independent choice and create opportunities for self-help in planning his own future." In ending his comments, Fogarty said, "Our goals for the elderly transcend political or party lines. The Congressional

¹A Special Report—the White House Conference on Aging.—U. S. Government Printing Office, 1960.

support for the bill, and the appropriations to administer it have had bipartisan endorsement. Whether this approach can be maintained throughout the Conference is of deep concern to me. I believe that the Nation's elderly have earned and deserve the best that the combined talents and wisdom of all our people can forge into a national program that will insure their independence, dignity and respect throughout their later years."

By law the Conference was in the hands of a National Advisory Committee of 150 citizens under the Chairmanship of former Congressman Kean (New Jersey). Of these 150, 13 were physicians, some as specialists in government, others men who have contributed thinking in the field of aging, and a few one recognizes as more or less representative of organized medicine.

At a later date comment will be made on these pages relative to action taken on certain items of interest to us as doctors. A complete report was promised the delegates in some 90 days. An attempt at a summary now on rather fragmentary data on resolutions and recommendations might be more or less out of context and should not be attempted.

Nevertheless, comment on several items of interest is needed and, as will be apparent, deals with the "image" of the doctor and the medical profession as seen through the eyes of the press and the politician, and reflected in the great mass of lay persons at the Conference, many of whom undoubtedly were unrealistic idealists.

We saw and heard the most amazing exhibition of denunciation and accusation of the A.M.A.—of a degree almost beyond belief. In my day I have heard and read all degrees of political mud-slinging by specialists in this art, and criticisms of organized medicine, but the shock of this episode was related to its setting. The opening plenary session was to be a place for platitudes and amenities, ranging from an invocation to a brief appearance of the President of the United States. It included a welcome by Secretary Fleming of HEW, words by Rep. Fogarty, the Chairman of the Advisory Committee and others. In this setting the blast against the medical profession by Senator Pat McNamara (D., Michigan) was the

more remarkable, so remarkable that I suspect it was deliberate with the idea of sowing dissension at the onset and putting the profession on the defensive. The thing that really hurt was the thunderous applause from the 2500 and more delegates present which reinforced his words. (One's naive immediate reaction is that it is a wonder any of the delegates ever put trust in a physician in their own affairs—a dichotomy of thought to which I think I know the answer but even then remains a puzzle.) McNamara accused the A.M.A. of the "placement of A.M.A. oriented delegates in sufficient strength in certain work groups to give the nation the impression that the conference does not favor such medical insurance." The obvious deduction is that if 250 physician delegates out of a total of 2700 and more, and 13 physicians on the Advisory Council of 150 could "stack" the conference, there must have been collusion somewhere, and that somewhere must have been with either Secretary Fleming of HEW or Under Secretary Bertha Adkins, who was in charge of the Conference. McNamara possibly was taking a double shot—political against the Eisenhower administration and personal political aggrandizement with his labor constituency in Michigan by lambasting the A.M.A. Much of his time on the plenary session was spent in castigating the A.M.A. and its stand against tying medical aid to Social Security, in which he made the statement which was broadcast by A.P.—"It is unfortunate that the A.M.A. continues to devote such massive effort to promotion of its 19th century philosophy rather than concentrating on the needs of tomorrow." Admitting all manner of bias, I hope I am objective in saying that at its least the McNamara blast represented an amazing lack of propriety under the circumstances, no matter how strongly he may feel. If there were basis in fact, such a blast at the last plenary session might be condoned—but for the opening session! To the credit of Congressman Fogarty it should be said he told newsmen this charge was "insulting" to the delegates. In remarks subsequent to McNamara's Secretary Fleming tried to smooth matters somewhat.

In a recent editorial on the *Harper's Story*,² I remarked, "It is amazing to what

an extent even a "free" press may reach the effect of a controlled press. The "herd" reaction of the writers of the press on the socio-economic facets of today's medicine is one of the phenomena of present-day writing." This "herd" reaction pervaded all reporting on the Conference. On Sunday afternoon before the opening of the Conference, all physician-delegates were invited to an A.M.A. meeting for briefing on the Kerr-Mills bill and suggested Social Security amendments for medical care. This provided an open forum for comments, questions, etc. "within the family" so to speak, though it was not an executive session—newsmen were present. In the course of the meeting two physician delegates cited what they disliked relative to the Kerr-Mills Bill—the application of a means test—pros and cons were registered. Here were the resulting headlines in the *Washington Post*—A.M.A. Stand on Aid for Aging Hit—'Cut Rate Charity' Seen by Physicians in Group's Policy"; and "'Charity Medicine' Charge Leveled at A.M.A. Stand on Aid for Aging." It stimulated Herblock's nasty cartoon entitled "Sir, Several More of Our Men Have Defected to the Enemy." Were the newspaper men asleep when our Dr. Harmon Monroe told the meeting of T.S.M.A.'s action in the recent meeting of the House of Delegates! Might this have been used for headlines and a story favorable to the medical profession? No, this might place the medical profession in a favorable light and by present-day standards of news reporters, this is not permissible! Drew Pearson in his *Merry Go Round* with "A.M.A. 'Doctors' Age Session" joined the smear campaign, though he had to dredge past quotes and remarks by "near-greats" to bolster his column.

It has been clear for quite a number of years that people do not like to spend money for what they cannot enjoy—this is the difference between illness and cars, boats and T.V. sets. The doctor personalizes illness and so his bill is begrudged; with the growth of a welfare state the philosophy of letting government take care of the unpleasant things is a natural development—such unpleasant things as illness and "saving for a rainy day." The newsmen swarm to the side that is weighted to win—it is human

nature to wish to be on the side of the winner.

This editorial comment has merely tried to give a bit of the atmosphere provided by politicians and the fourth estate for the White House Conference on Aging.

R. H. K.

DEATHS

Dr. Charles Hunter Heacock, 72, Memphis, died December 30th in Ardmore, Pennsylvania, as the result of a heart attack.

Dr. William Charles Ruble, Jr., 51, Newport, died December 20th as the result of a heart attack. Dr. Ruble served as Mayor of Newport for four terms.

Dr. Jesse Corum Hill, 71, Knoxville, died January 10th at his home. He was the first physician to practice psychiatry in Knoxville.

Dr. Andrew Jackson Jamison, 81, Murfreesboro, died January 11th at the Baptist Hospital in Nashville.

Dr. Perry J. Gambill, 68, Knoxville, died January 6th at Presbyterian Hospital.

PROGRAMS AND NEWS OF MEDICAL SOCIETIES

Nashville Academy of Medicine and Davidson County Medical Society

The Academy's annual installation of officers meeting was conducted on January 10th at the Hermitage Hotel. Dr. Laurence Grossman assumed the duties of president for 1961 succeeding Dr. Thomas F. Weaver. Other officers installed were Dr. Joseph M. Ivie, president-elect and Dr. Tom E. Nesbitt, secretary-treasurer. Dr. James N. Thomasson was elected a member of the Board of Directors and Dr. Robert M. Finks was re-elected to the Board.

Dr. Grossman's presidential address covered pertinent topics about the image of medicine and problems facing the medical profession.

Greene County Medical Society

The Society met for its regular monthly meeting on January 3rd with the new president of the society, Dr. Haskell W. Fox, presiding. Dr. Lyman Fulton, Johnson City, was the guest speaker and his subject was "The Practical Aspects of Hypertension."

Monroe County Medical Society

New officers of the society were elected at the December meeting conducted in the home of Dr. and Mrs. Joseph K. Wallace. Officers for 1961 are: Dr. Wallace, president; Dr. H. M. McGuire, vice president and Dr. James H. Barnes, secretary.

Consolidated Medical Assembly of West Tennessee

Members of the Consolidated Medical Assembly conducted the regular monthly meeting on January 3rd in the New Southern Hotel, Jackson. The program consisted of a film entitled "Disability Decision." The film was shown through the sponsorship of the social security administration.

Dr. Oscar McCallum, Henderson, was elected president for 1961. Vice presidents elected were Dr. George Dodson, Jackson; Dr. David E. Stewart, Brownsville and Dr. R. M. Conger, Lexington. Dr. G. B. Wyatt, Jackson, was re-elected secretary-treasurer.

Weakley County Medical Society

At a recent meeting of the Weakley County Medical Society, election of officers for 1961 was held. Newly elected officers are Dr. G. S. Plog, Martin, president; Dr. Ira Porter, Greenfield, vice president; and Dr. Nathan Porter, Greenfield, secretary-treasurer.

Memphis-Shelby County Medical Society

The Memphis and Shelby County Medical Society met for its regular monthly meeting on the evening of November 1 in the Institute of Pathology Building. The scientific program followed a short business meeting. The speaker was introduced by Dr. Otis Warr. Dr. John Stewart Chapman, Assistant Dean of Postgraduate Education and Professor of Medicine at the University of Texas Southwestern Medical School, Dallas, Texas, gave an informative talk on "Anonymous Mycobacteria."

Chattanooga-Hamilton County Medical Society

The annual banquet and installation of officers was conducted on January 3rd at the Chattanooga Golf and Country Club. The society installed Dr. Augustus McCravey as president; Dr. Edward G. John-

son as president-elect; and Dr. Charles W. Hawkins as secretary-treasurer. Also installed was Dr. Harry E. Jones as a member of the Board of Censors and Dr. Gene Kistler, a member of the Board of Governors.

Knoxville Academy of Medicine

The society met for its regular monthly meeting on January 10th in the Academy of Medicine building. The program consisted of an address by Mr. James Foristel, congressional representative of the American Medical Association, Washington, D. C. Mr. Foristel is a member of the staff of AMA's Washington Office. He spoke on the outlook of legislation in 1961 as it pertains to physicians.

Mr. Jack Ballentine, Executive Director of the Tennessee State Medical Association reviewed pertinent medical legislation to be brought before the Tennessee General Assembly.

Members of the society heard a proposal for research expansion in Knoxville presented by Dr. Goodall of the Research Group at the UT Memorial Hospital.

Anderson-Campbell County Medical Society

The society conducted its annual Christmas dinner for members and their wives on December 22nd, at the Russell Hotel in La-follette. Christmas carols were sung and the general Christmas theme was carried out at the meeting of the society.

NATIONAL NEWS

The Month in Washington (From the Washington Office, AMA)

Spokesmen for the medical profession at the White House Conference on Aging supported the Kerr-Mills voluntary program for health care of elderly persons as an efficient, economical way to furnish assistance to those who need help. Leading physician delegates to the Conference also continued vigorous opposition to the Social Security approach espoused by organized labor.

Continuing their all-out campaign for the

Social Security approach, labor union leaders used the Conference as a forum for further attacks on the medical profession.

Dr. J. Lafe Ludwig of Los Angeles, Chairman of the American Medical Association Council on Medical Service told a pre-Conference meeting of the physician delegates that it would be a "national tragedy—unfair to old and young alike—if the Kerr-Mills law should be shelved for a Social Security plan for medical care of the aged. "Federal medicine would mean red tape, bureaucratic control, and high costs," Dr. Ludwig said. "Most important of all, it would mean inferior medical care for the people whom we are trying to help."

Describing the Kerr-Mills law as a "historic milestone," Dr. Ludwig said the overwhelming majority of the nation's physicians believe it is "an excellent law which can and will work and deserves every opportunity to do so."

Dr. Leonard W. Larson of Bismarck, N.D., president-elect of the AMA told the Conference's Health and Medical Care Section that more attention must be given to keeping older persons healthy. He was chairman of the section.

"We spend millions of dollars and hours developing sound, well-based programs for care of the sick, but at the same time we virtually ignore the vast opportunities for preservation and promotion of health," Dr. Larson said.

"We must do more than react to the minority of older persons who are ill—we must act for the great majority who are well."

In a statement issued in Chicago, Dr. E. Vincent Askey of Los Angeles, President of AMA, branded as false an allegation that the White House Conference had been "captured" by organized medicine, private insurance and business interests. Dr. Askey specifically referred to such a charge made by Prof. Wilbur J. Cohen of the University of Michigan but the AMA president's statement applied to similar charges made by representatives of organized labor.

Dr. Askey implied that, "if anyone has a legitimate complaint regarding the choice of personnel directing the activities" of the key section on income maintenance, it was opponents of the Social Security approach.

Dr. Ludwig also answered organized labor's attacks on the AMA at the Conference. Dr. Ludwig accused George Meany, president of the AFL-CIO, of "attempting to undermine" the Conference to "further his own partisan interests."

"Meany obviously is prepared to go to any extreme to impugn the motives of those who disagree with him," Dr. Ludwig said. "Delegates to this conference representing medicine and many other groups came here in a spirit of cooperation determined to take realistic action to help the elder citizens of this country."

"Meany, through his campaign of smear and hostility, is making this difficult, if not impossible."

Dr. Ludwig said that some labor leaders "obviously are more interested in saddling the people of this country with a system of socialized medicine" than he is in "helping those older people who really need help."

"Meany and such of his cohorts as Sen. Pat McNamara (D. Mich.) appear to be doing their utmost to create so much confusion that recommendations of the State Conference on Aging will be forgotten," Dr. Ludwig said.

"Of the 30 states making specific recommendations regarding financing of medical care for the aged, only 10 favored the social security tax."

President Eisenhower urged the 2,700 delegates to the Conference to reconcile their differing views and agree on a sound program. He told the delegates it was their responsibility to provide some kind of guidance for Congress to use in its future deliberations."

President John F. Kennedy declined an invitation to address the Conference as President-elect. He and Congressional Democratic leaders decided weeks before the Conference to make medical care for the aged under Social Security an Administration priority bill for early submission to Congress.

But some key Democrats in Congress announced they would not go along with President Kennedy on the issue. Sen. Robert S. Kerr (D., Okla.), co-author of the medical-care-for-the-aged program approved by Congress last year, said it should

be financed by a general tax—"not a limited tax like Social Security."

Similar opposition to the Social Security approach was expressed by Sen. John J. Sparkman (D., Ala.). Chairman Harry F. Byrd (D., Va.), of the Senate Finance Committee earlier had said he was convinced that providing medical care for the aged under Social Security would lead to socialized medicine and possibly bankrupt the Social Security trust fund.

Despite the Kennedy Administration's espousal of the Social Security plan, the AMA pledged its continued cooperation to the Department of Health, Education and Welfare on other health programs.

A group of AMA officials headed by Dr. Askey told the new H.E.W. secretary, former Gov. Abraham Ribicoff of Connecticut, at a pre-inaugural conference that the Association "pledges its continued cooperation to HEW to work for the best medical care for the nation." The AMA "has always had a deep sense of responsibility for the health needs of the people," Dr. Askey said.

The AMA officials also advised Ribicoff that they would help implement the Kerr-Mills law in any way possible.

White House Conference on Aging

The White House Conference on Aging concluded on January 12 with a recommendation for a social security health care plan similar to the one advocated by President-Elect Kennedy. . . . The vote by the Income Maintenance Section, which dealt with this issue, was 170 to 99. . . . The 99 in the minority issued a report which declared that incorporating medical insurance under Title II of the Social Security Act "would interfere with the physician-patient relationship; that it is unnecessary because of the potential growth of voluntary insurance, and that all needy aged can be cared for by public assistance through the recently enacted federal program of health care for the low income aged." . . . The minority report also pointed out that the majority report was not in accord with the official expression of the majority of state conferences on aging. . . . The Medical Care Section, chaired by Dr. Leonard W. Larson, AMA President-Elect, attempted to introduce an amendment opposed to the compulsory social se-

curity medical care plan. However, it was ruled out of order by Conference Chairman, Robert W. Kean.

MEDICAL NEWS IN TENNESSEE

Dover Dedicates Medical Facility

The City of Dover has long searched for a physician to practice in the community and was finally successful in bringing a physician to the city. Dover's new \$32,000 Medical Center was dedicated on December 18th. Dr. G. E. Smith will staff the new unit. Dr. Smith is a graduate of the medical college of Virginia and has been engaged in the private practice of medicine at Richmond for the past 18 months.

Medical Symposium Presented by the East Tennessee Heart Association

Some 200 doctors from a six-state area convened in Knoxville on January 19th, for the Eleventh Annual Medical Symposium presented by the East Tennessee Heart Association.

The symposium entitled "Progress Reports in Cardiovascular Disease," was held at the Andrew Johnson Hotel. Addressing the group were: Dr. Paul Adams, Jr., associate professor, department of pediatrics staff, University of Minnesota; Dr. Louis N. Katz, director of cardiovascular department, Medical Research Institute, Michael Reese Hospital, Chicago; Dr. John W. Kirklin, professor of surgery, Mayo Foundation Graduate School, University of Minnesota; and Dr. Harry D. McIntosh, associate professor of medicine, Duke University. Doctors from Alabama, Georgia, Kentucky, Mississippi, Virginia and Tennessee were in attendance.

Changes in Standards of Hospital Accreditation

A relaxation of stringent hospital medical staff meeting and attendance requirements has been announced by the Joint Commission on Accreditation of Hospitals. This is one of several important changes being announced this month by the Joint Commission, partly as a result of AMA House of

Delegates protests and recommendations during the past two years.

The new standards for accreditation are supposed to be in the hands of every hospital chief of staff by mid-December. The main revisions include:

1. A change in meeting and attendance requirements. It is now up to each hospital to write its own requirements. The Commission will judge as to the adequacy of the requirements for the needs of the specific hospital.
2. A better definition of the functions of the medical records committee.
3. Better definition of consultation requirements, consultants, and reception and evacuation of mass casualties.
4. A change in the present standards of keeping an index on all pathological tissue and radiological reports to a requirement of teaching or interesting case index only.

Many changes are being made to make the standards more understandable. At the same time, the Joint Commission is urging that the medical staff of every hospital review every pertinent communication from the Joint Commission so physicians will be better acquainted with the standards and interpretive details.

Questions of Interest to Physicians on Workmen's Compensation Law

Following are questions and answers that will be of assistance to physicians in Tennessee that deal with matters involving workmen's compensation:

- (Q) If an employee is injured after refusing to use a safety appliance provided by the employer, can the employee receive compensation for such injury?
- (A) No—No compensation shall be allowed for an injury due to willful failure or refusal to use a safety appliance.
- (Q) Are farm laborers covered by Workmen's Compensation Law?
- (A) No
- (Q) What is the maximum amount that may be paid if injury results in death?
- (A) \$12,500 exclusive of medical, hospital and funeral benefits.
- (Q) Is there a limit to attorney's fees allowed in a case in which court proced-

ure is involved to make recovery for injured employee?

(A) Yes—No attorney's fees in excess of 20% of the amount of award is to be paid by the party employing the attorney.

(Q) If employer and employee fail to reach an agreement on compensation due under the Workman's Compensation Law who shall decide the issue?

(A) Either party may submit the matter for determination to the judge or chairman of the County Court in the County in which the accident occurred.

Status of Hill-Burton Grants in Tennessee

The Department of Health, Education, and Welfare reports that as of September 30, 1960, the status of all Hill-Burton grants for the State of Tennessee is as follows:

Completed and in Operation: 123 projects at a total cost of \$85,811,581, including federal contribution of \$32,876,030 and supplying 4,402 additional beds.

Under construction: 27 projects at a total cost of \$26,603,003 including federal contribution of \$10,774,443 and designed to supply 1,123 additional beds.

Approved, but not yet under construction: 8 projects at a total cost of \$6,356,086 including \$2,348,996 federal contribution and designed to supply 254 additional beds.

Mid-South Postgraduate Medical Assembly

The annual meeting of the Mid-South Postgraduate Medical Assembly was conducted in Memphis February 14-17, 1961. Guest speakers at the Assembly were as follows:

Dermatology—J. Fred Mullins, M.D., Galveston, Texas

Gynecology—R. Gordon Douglas, M.D., New York, New York

Internal Medicine—Charles E. Jackson, M.D., Bluffton, Indiana; Grace M. Roth, Ph.D., Albuquerque, New Mexico; Don M. Samples, M.D., New Orleans, Louisiana; Beverly T. Towery, M.D., Louisville, Kentucky

Obstetrics—H. Hudnall Ware, Jr., M.D., Richmond, Virginia

Ophthalmology—Frank D. Costenbader, M.D., Washington, D.C.

Orthopaedic Surgery—Mark B. Coventry, M.D., Rochester, Minnesota

Otolaryngology—Theodore E. Walsh, M.D., St. Louis, Missouri

Pathology—John J. Andujar, M.D., Fort Worth, Texas

Pediatrics—J. W. DuShane, M.D., Rochester, Minnesota; J. H. Ebbs, M.D., Toronto, Canada

Radiology—C. Allen Good, M.D., Rochester, Minnesota

Surgery—Bentley P. Colcock, M.D., Boston, Massachusetts; Murray M. Copeland, M.D., Houston, Texas; George Crile, Jr., M.D., Cleveland, Ohio

Neurosurgery—J. Grafton Love, M.D., Rochester, Minnesota

Thoracic Surgery—Walter W. Fischer, M.D., New York, New York

Urology—Lawrence F. Green, M.D., Rochester, Minnesota

The meeting was conducted at the Peabody Hotel in Memphis.

Vanderbilt University School of Medicine

The Vanderbilt University School of Medicine dedicated its new W. R. Wills Center for Psychiatric Treatment and Research on January 6th. Dr. Harvie Branscomb, Chancellor, termed it "a contribution to the medical school and to the community." The facility will be known as the W. R. Wills Center for Psychiatric Treatment and Research. The \$750,000 Wills Center, which forms the south wing of Vanderbilt Hospital was financed from University funds, a grant from the Ford Foundation and government funds. A Symposium on Child Analysis was held during the day. Analysts Hoffer, Jessner, Lourie, Evans and Frailberg, representing both the British and American societies, took part in the Symposium.

University of Tennessee College of Medicine

The Division of Pathology and Microbiology has received a \$189,000 grant from the U.S. Public Health Service for a five year period to train dentists in experimental pathology. The additional training will enable graduates to better recognize tumors

of the mouth and will also prepare them for teaching and research in oral pathology.

★

Dr. Amos Chernoff, UT Memorial Research professor, gave a lecture series at the Vanderbilt University School of Medicine on January 11-14.

★

During 1960, the University of Tennessee began building with the last of the capital outlay appropriations of the 1959 Tennessee General Assembly. At the UT Medical Units in Memphis, work is expected to begin in 1961 on a \$1,500,000 radiology building and an \$800,000 dental-pharmacy research building. These buildings are being financed by funds coming from UT, the city of Memphis and other sources.

★

One of the nation's outstanding leaders in medical education addressed the staff of the University of Tennessee Medical Units on January 17th. He was Dr. George E. Miller, associate professor of medicine and director of research in medical education at the University of Illinois College of Medicine, Chicago. His topic was "Medical Education: Time for a Change."

★

Dr. John Martin Ginski of the University of Nebraska College of Medicine in Omaha has joined the staff as assistant professor of clinical physiology.

★

Chattanooga Area Heart Association

On January 26 the Association presented an all-day program with three visiting clinicians—Doctors C. Walton Lillehei, Professor and Chairman of Department of Surgery, University of Minnesota Medical School, Minneapolis; James V. Warren, Professor of Medicine, Chairman of Department of Internal Medicine, Galveston, Texas; and William Thomas Foley, Associate Professor of Clinical Medicine, Cornell University Medical College; Attending physician and Chief of the Vascular Clinic, New York Hospital, New York. Dr. E. Wayne Gilley was Chairman of the Symposium Committee, which arranged the program.

Department of Public Welfare

Dear Dr.

As of November 1, 1960 the Department of Public Welfare made some changes in the Public Assistance Hospitalization program. These changes apply to hospitalization coverage for *Old Age Assistance recipients only*.

Each admission for an Old Age Assistance recipient is limited to 10 days hospitalization in any one fiscal year, July 1 through June 30, unless certain conditions exist. There is no limit to the number of admissions of Old Age Assistance recipients *provided* the total number of days does *not exceed 30* in any one fiscal year. The specified conditions which are the exceptions to the 10-day limit for any one admission are as follows:

1. Fractures of the lower extremity and pelvis only 30 days
2. Myocardial infarction 30 days
3. Uremia 30 days
4. Third degree burns 30 days
5. Intestinal obstruction 14 days
6. When complications develop that, in the opinion of the attending physician, require continued hospitalization, an extension to the 10-day limit may be made not to exceed 30 in any fiscal year.

- a. In order to secure the needed days for this extension of hospitalization, the attending physician will provide a written request for this extension, outlining the medical reasons for the extension and giving the additional number of days needed. This request in narrative form will be given by the doctor to the hospital. The hospital will submit the request with the original application, Form DPW-58, to the Medical Review Officer for his recommendation.

The Department's policy which remains unchanged is,

1. The definition of hospitalization which applies to all recipients of public assistance is,
 - a. "Acute illnesses and major injuries which cannot be treated outside the hospital but require hospitalization for successful treatment are the only conditions under which the Department of Public Welfare can provide hospitalization for public assistance recipients."
2. Recipients of Aid to the Blind, Aid to the Disabled, and Aid to Dependent Children are eligible for only 10 days hospitalization in any one fiscal year.

Each physician in the State of Tennessee has a positive responsibility in regard to the hospitalization program for the recipients of public welfare assistance. The Department of Public Welfare is in effect providing a hospitalization type insurance for certain individuals in the state and the provisions of this hospitalization must be jealously guarded. This will entail your screening your patients carefully before hospitalization to be sure that they meet the criteria for hospitalization as

listed in 1., a., above; that therapy be prompt and vigorous so that these patients may be dismissed from the hospital at the very earliest practicable date and thus save for that patient additional days that may be necessary for some future illness.

It is quite obvious that contrary to the usual hospitalization program, the Department of Public Welfare has a budgeted quantity of money for each fiscal year. Improper use of these funds will result in curtailment of various portions of this program, producing hardships for you as the physician and for your patients. These are your responsibilities.

Fraternally yours,

A. B. Harwell, M.D., F.A.C.P.
Medical Consultant

APPROVED:

Mrs. C. Frank Scott
Commissioner
ABH:p

PERSONAL NEWS

Dr. Ralph O. Rychener, Memphis, has been re-elected for the fifth term as President of the National Medical Foundation for Eye Care.

Dr. Glenn E. Horton, Memphis, has been appointed Medical Consultant in Pulmonary Diseases for the United States Public Health Service (Marine) Hospital in Memphis.

Dr. E. Harris Pierce, Cleveland, announces the removal of his office to 343 Central Avenue, N.W., Cleveland.

Dr. John E. Neumann, Paris, has been elected President of the Henry County Medical Society. Other officers elected were **Dr. W. G. Rhea**, vice president and **Dr. Kenneth Ross**, secretary-treasurer.

Dr. Lawrence H. Lassiter, Chattanooga, has announced the opening of his office for the practice of ophthalmology in the Provident Building.

Dr. Wallace B. Bigbee, Sr. formerly of Chattanooga, has opened an office for the practice of medicine in McMinnville.

Dr. Guy C. Pinckley, Jamestown, is the new chief of staff at the Fentress County General Hospital.

Dr. Ira S. Pierce, Jr., Knoxville, has been elected coroner for Knox County.

Dr. George F. Aycock, Nashville, has been presented with a pin by the Tennessee State Medical Association recognizing his fifty years in the practice of medicine.

Dr. William T. Black, Jr., Memphis, has been installed as president of the Memphis Obstetrical and Gynecological Society. He succeeds **Dr. H. Glenn Williams**. **Dr. L. C. Lewis** is president-elect, **Dr. Prentiss Turman** is secretary, and **Dr. J. Palmer Moss** was re-elected treasurer.

Dr. Harold Thomas McIver, Jackson, has been elected chief of staff of the Jackson-Madison

County General Hospital. Assistant chief will be **Dr. Baker Hubbard**.

Dr. Chas. H. Webb, Tullahoma, recently addressed Area Six Licensed Practical Nurses group.

Dr. Alfred P. Rogers, Chattanooga, has been certified as a Diplomate of the American Board of Surgery.

Dr. Oscar McCallum, Henderson, has been elected president of the Consolidated Medical Assembly of West Tennessee. He succeeded **Dr. George Spangler** of Humboldt.

Dr. John H. Burkhart, Knoxville, has been re-elected president of the Knoxville City School Board.

Dr. C. Robert Clark, Chattanooga, announces the moving of his office for the practice of orthopaedic surgery from 700 Dodds Avenue to the Medical Arts Building.

Newly installed officers of the medical staff of the Bristol Memorial Hospital are: **Dr. Homer Williams**, chief of staff; **Dr. Bennett Y. Cowan**, vice chief of staff, **Dr. William Johnson**, secretary. Others include **Dr. Robert Repass**, chief of surgical section; **Dr. Walter R. Gaylor**, chief of medical section; **Dr. Sidney Whittaker**, chief of obstetrics and pediatrics section. These physicians are from Bristol.

Dr. G. H. Berryhill, Jackson, has been named Jackson's "Man of the Year for 1960." The announcement was made by the Jackson Exchange Club.

Dr. Thomas C. Gladding, Memphis, recently addressed the Memphis and Shelby County Medical Technicians. His subject was "Corticosteroids."

Dr. Louis Ulin, Chattanooga, has moved into his new office at 107 Professional Building.

Dr. Robert Jones, Dyersburg, joined the Dyer Clinic on January 1st.

Dr. Arthur W. Green, Memphis, has been promoted to the rank of Colonel in the 306th Field Hospital, United States Army Reserve unit at Memphis.

Dr. Earl Eversole, Jr., Oak Ridge, has opened his new offices in the old Medical Arts Building.

Dr. John T. Mason, McMinnville, has been elected president of the Middle Tennessee Medical Association. Re-elected as secretary was **Dr. Greer Ricketson** of Nashville.

Dr. George A. Zirkle, Jr., Knoxville, has been named chief of staff at the Baptist Hospital. **Dr. John E. Kesterson** and **Dr. William A. Gardner** were named vice chief of staff and secretary of the staff respectively. Elected to other posts were **Dr. E. C. Idol**, chief of general practice; **Dr. Walter H. Benedict**, chief of surgery, **Dr. K. A. O'Connor**, chief of obstetrics and gynecology; and **Dr. Daniel Davis**, chief of medicine. All physicians are from Knoxville.

Dr. Edwin E. Gray, Tullahoma, has recently been named chief of staff of the Coffee County Hospital. **Dr. Clarence Farrar** was named chief of surgery and outpatient department; **Dr. Charles Harvey**, chief of the department of medicine; **Dr.**

Ralph Brickell, chief of the department of obstetrics and new-born nursery; **Dr. Coulter Young**, chief of anesthesiology; and **Dr. Claude Snoddy**, chief of laboratory and pathology department.

Dr. J. E. Phillips, McMinnville, has been elected president of the Warren County Medical Society. Elected as vice president was **Dr. J. F. Fisher**. **Dr. Duane J. Davidson** was re-elected as secretary-treasurer.

Dr. Pervis Milnor, Jr., Memphis, has been elected chief of the medical staff of the Memphis Baptist Hospital.

Dr. Ray O. Fessey, Nashville, has been named to the City Board of Hospital Commissioners. He succeeded **Dr. Oscar F. Noel**, Nashville. Other members of the Board are **Dr. Thomas F. Frist**, **Dr. William J. Card**, **Dr. Paul G. Morrissey**, and **Dr. H. H. Walker**.

Dr. Henry Callaway, Jr., Maryville, has been appointed to the active medical staff of Blount Memorial Hospital.

Dr. Luther Beazley was recently elected President of the Nashville Pediatric Society. **Dr. Lowry Dale Kirby** was re-elected secretary-treasurer.

Dr. Charles M. Gill has opened his office for the practice of Obstetrics and Gynecology, Nashville.

Dr. Eric M. Chazen, Nashville, announces the opening of his office for the practice of pediatrics in the Medical Arts Building.

BOOK REVIEW

MASTER YOUR TENSIONS AND ENJOY LIVING AGAIN. By **George S. Stevenson, M.D.** and **Harry Milt.** Prentice-Hall, Inc., New York: 1959. Price \$4.95.

This book is extremely informative and interestingly written. It gives a broad overall outlook on the current causes of tension in our age and the more specific individual etiologies of tension.

Eight chapters are devoted to each of eight methods for getting rid of tension in daily living, including chapters on "curbing the Superman urge" and on "taking a positive step forward."

In addition there are informative chapters dealing with the rearing of children in a psychologically sound environment and with marriage.

There are numerous books of this type available to the layman. This one is outstanding. The reviewer believes that in mild tension states, the physician may use this book to advantage by presenting it for the patient.

COLD INJURY, GROUND TYPE. By **Colonel Tom F. Wayne, M.C., U.S.A., Professor of Preventive Medicine, School of Medicine, University of Pennsylvania,** and **Michael E. DeBakey, M.D., Professor of Surgery and Chairman of the Department, Baylor University College of Medicine, Houston.** 542 pages. Washington: U. S. Government Printing Office, 1958. Price \$6.25.

Cold injury to the hands and feet is a serious disease of concern to both military and civilian

medicine. Through the centuries, military campaigns have been won and lost by the complete disability which follows this injury. It has recently been pointed out that in our expanding frontier in Alaska, any interference with the arrival of fuel oil for heating the homes of these citizens would rapidly produce a mass disaster of cold injury. The same is true in many parts of the world where the modern inhabitant is neither trained nor prepared for prolonged exposure to cold.

The office of the surgeon general of the Army has made available the comprehensive book which gives a detailed account of the experiences with ground type cold injury until 1958. Subsequent studies now being pursued in cold climates are inquiring into the new techniques for early prognostication of the extent of injury (a point of great concern to the military forces) and of therapy. This book provides an excellent background of facts for all those who will care for patients with injury following exposure to cold.

CLINICAL OBSTETRICS AND GYNECOLOGY.

Volume 3, Number 3, September, 1960. Pp. 537-808. New York: Paul B. Hoeber. A Quarterly Publication. Subscription \$18.00 per year.

This issue of the publisher's permanently bound quarterly series of symposia centers on bleeding and hemorrhage in late pregnancy, edited by R. Gordon Douglas, who also has written the introductory paper stating the scope of the problem against its perspective of steady improvement in maternal mortality over the past 25 years. Contributions follow on each of the standard causes of antepartum hemorrhage, intrapartum and postpartum bleeding, and operative hemorrhage. The succeeding section on hemorrhagic shock cites the possibility of inadequate speed of transfusion even when blood loss has not been underestimated.

All the papers are reasonably well written and a balanced presentation, without particular overlapping despite authors from many different teaching centers, is achieved. Although this symposium can easily be sanctioned as quite sound, none of the papers are particularly stimulating and the tone throughout is editorial. Certain of the presentations could have been much improved. The chapter on coagulation defects is prefaced by the statement that "'clotting defect' has too frequently been considered synonymous with 'fibrinogen deficiency' . . . and the discriminate use of fibrinogen has been an undesirable product," yet the ensuing discussion leaves little other conclusion that fibrinogen does play the central role despite diverse etiologies. The discussion on delayed complications of hemorrhage attempts to discuss such advanced subjects as renal shutdowns, Sheehan's syndrome and hepatitis in such a sketchy manner that they had best not been brought up at all.

The volume also includes a rather good 20 page article on frigidity, its philosophic generality commensurate with our present inadequacy of specifics on this subject. Three short historical essays fill

out the remainder; one on the forceps, always a fascinating subject, is woefully short. All of the papers in this issue lack the comprehensive depth one suspects the authors to be capable of proffering, or their specialist subscribers to desire. As a tightly edited series for the numerically more frequent generalist, it is scarcely more satisfactory than a standard text and is not enthusiastically recommended.

INFECTIOUS DISEASES OF CHILDREN. By Saul Krugman, M.D., Professor and Chairman, Department of Pediatrics, New York University School of Medicine; and Robert Ward, M.D., Professor and Head, Department of Pediatrics, University of Southern California School of Medicine, Los Angeles. Second Edition, 387 p. St. Louis: The C. V. Mosby Co., 1960. Price \$13.00.

This is a superior clinical manual whose appearance in a second edition just two years after the first is tribute to its effectiveness as well as progress in the viral area. The strong diagnostic emphasis is reinforced by fairly prolific illustration, including many colored illustrations, and unique schematic diagrams showing the differences in the various infectious rashes a pediatrician must cope with frequently and quickly. The therapeutic discussions may be highly recommended; the universal permeation of antibiotics into every branch of clinical medicine has made many strong men lose their perspective. The authors label antimicrobial trends as such and a definitive recommendation is clearly made by them, avoiding dogmatism without loss of the firmness desired in a specialty text. In no way intended as a complete text of infectious diseases, there is nonetheless a scrupulously thorough coverage of the acute viral syndromes which will be most useful. This book may be recommended as a supplement to adult, as well as child, practice.

CLINICAL APPLICATIONS OF DIAGNOSTIC AND THERAPEUTIC NERVE BLOCKS. By John J. Bonica, M.D. 34 p.; Publisher, Charles C. Thomas, Springfield, Illinois, U.S.A.

This book presents the subject of nerve blocks in a different fashion than that usually associated with books on regional anesthesia. This results from the author's established interest in pain and its management. The book begins with a brief history of the use of blocks for alleviation of pain. Chapter two deals with the mechanism of pain and the ways of modifying these changes. The section for indication on nerve blocks is very good and he re-emphasizes the necessity of being a physician, not just a technician blocking the nerves; by this, meaning the necessity of evaluating the patient as a whole as to whether or not the nerve blocks offer any possibility for relief of pain.

The rest of the book is very logically arranged with general and specific remarks concerning technique for all areas of the body. There is an excellent chapter on agents used to produce blocks, both short-acting and long-acting types. Part II

of the book is devoted to the clinical consideration for carrying out the block technic. The book is a very comprehensive one and should be not only of use to anesthesiologists, but also to other persons interested in the relief of the modality of pain and the use of block anesthesia for this purpose.

OCCUPATIONAL DISEASES AND INDUSTRIAL MEDICINE, by Rutherford T. Johnstone, M.D., and Seward E. Miller, M.D. Published by W. B. Saunders Co., 1960, Philadelphia. 482 p.

This thoroughly modern textbook will be an extremely valuable addition to the libraries of medical schools, departments of preventive medicine and public health, schools of public health, and those involved in teaching and practice concerning occupational diseases and industrial medicine.

This is a complete and very practical book containing a broad coverage of the extremely varied materials used in industry today. Occupational diseases long known to man are dealt with adequately, but even more valuable is the attention given to new diseases caused by numerous new industrial compounds and products. Chapters on pesticides and ionizing radiation are very timely.

The references at the end of each chapter are very helpful for those who wish to delve further into special aspects.

Both the teacher and the student will find this excellent book very helpful.

Study of Bacterial Endocarditis—Comparisons in Ninety-Five Cases. Friedburg, Charles K., Goldman, Hubert M., and Field, Leonard E. *Arch. Int. Med.* 107:6, 1961.

The authors report 95 cases of bacterial endocarditis treated at the Mt. Sinai Hospital, New York, between 1952 and 1959. Comparisons are drawn between this series and one previously reported, which consisted of 148 cases treated at the same hospital between 1944 and 1950. The recovery rate of 83% in the present group represents an improvement over the 66.2% reported in the earlier series.

Cases with negative blood cultures were included if they fulfilled clear clinical criteria for bacterial endocarditis. Of the 95 cases there were 76 with positive blood cultures. Nonhemolytic streptococci comprised 61% of the positive group. The causative organism in 49 was *Streptococcus viridans* and in 7 the enterococcus (*Streptococcus fecalis*). There were 10 patients in whom a staphylococcus was isolated. In only one was a truly resistant organism found, this a *Pseudomonas aeruginosa*. The underlying heart disease was definitely or probably rheumatic in 79 of these cases. Of the 8 cases in which there was no underlying heart disease, 5 were classified as having acute bacterial endocarditis. There were 6 cases of congenital heart disease, 1 with syphilitic aortic insufficiency and 1 with arteriosclerotic heart disease.

Of 87 cases classified as subacute bacterial endocarditis, 89% recovered. Tables are presented

which indicate that mortality increased directly with the duration of untreated or inadequately treated illness, as do complications, such as congestive heart failure and cerebral vascular accidents. Approximately 50% of the patients were above the age of 50 years, having a recovery rate of 72%, as compared with those below the age of 50, who had a recovery rate of 93%. Seven of 10 deaths from subacute bacterial endocarditis occurred in patients who had symptoms for more than four months before definitive diagnosis and treatment. There were 8 cases classified as having acute bacterial endocarditis, with a recovery rate of 25% reported.

The need for early diagnosis and treatment is emphasized repeatedly in order to decrease the mortality rate. The following diagnostic criteria are recommended: Unexplained fever for more than 7 to 10 days in a patient with a significant cardiac murmur should form the basis of a presumptive bacterial endocarditis. The proper application of these criteria and the choice and dosage of antibiotics are discussed in detail. (Abstracted for the Middle Tennessee Heart Association by Thomas B. Haltom, M.D., Nashville.)

ANNOUNCEMENTS

Oxygen Therapy Institute

On February 20th and 21st, 1961, a two-day institute will be held in the auditorium at Baptist Hospital in Nashville, presented by the Tennessee Inhalation Therapy Association. The guest speaker will be Dr. Edwin R. Levine, Director, Department of Inhalation Therapy, Edgewater Hospital, Chicago, Illinois. Dr. Levine will speak on "I.P.P.B. Medicated Treatments and Exsufflation with Positive and Negative Pressure."

Other speakers will be from New York, New Jersey, Pittsburgh and Tennessee. Among the speakers will be anesthesiologists, cardiologists, pediatricians, chest surgeons and general practitioners. Many types of new equipment will be demonstrated.

Cardiovascular Seminar

The Eighth Annual Cardiovascular Seminar will be held in the University of Mississippi Medical Center in Jackson, April 5-7, 1961. A Mississippi Heart Association professional education program, the seminar is co-sponsored by the School of Medicine. Two internists, a pediatrician, a physiologist, and a surgeon will comprise the authoritative guest faculty. These speakers are to be Dr. Claude S. Beck of Western Reserve University, Dr. James W. DuShane of Mayo Clinic, Dr. E. Sterling Nichol of Miami, Dr. Lysle H. Peterson of the University of Pennsylvania, and Dr. Irving S. Wright of New York.

Physicians from the entire southeastern area regularly come to this seminar. Family physicians may obtain 20 hours of Category I AAGP credit

for attendance. Dr. Raymond F. Grenfell of Jackson is chairman of the Mississippi Heart Association professional education committee which plans and finances the program.

Southern Regional Meeting of the American College of Gastroenterology

The Southern Regional Meeting of the American College of Gastroenterology will be held in Houston, Texas, on Sunday, 19 March 1961. The sessions, which will be held in the Jesse H. Jones Library Building of the Texas Medical Center, will commence at 9:00 A.M.

Participating in the program will be among others, W. C. Arnold, M.D., Robert Nilson, M.D., George Morris, M.D., and Bela Halpert, M.D., F.A.C.G., Houston, Texas; H. J. Robert, M.D., Palm Beach, Florida; Henry Laurens, M.D., A. C. Broders, Jr., M.D., Temple, Texas. The Houston Gastroenterological Society will be the host for this meeting.

The program is under the Chairmanship of Ralph D. Eichhorn, M.D., F.A.C.G., Houston, Texas and H. B. Eisenstadt, M.D., F.A.C.G., Port Arthur, Texas, Governor of the College of Texas.

The Southern region consists of the states of Alabama, Arkansas, Florida, Georgia, Kentucky, Louisiana, Mississippi, North Carolina, Oklahoma, South Carolina, Tennessee, Texas and Virginia.

Members of the medical profession are cordially invited to attend. A copy of the program may be obtained from the Secretary, American College of Gastroenterology, 33 West 60th Street, New York 23, New York.

Postgraduate Day in Surgery—Vanderbilt University School of Medicine

A program on Practical Approaches to Common Orthopedic Office Problems is scheduled for March 16, 1961. Painful affections of the musculoskeletal system are responsible for a large percentage of visits by the patient to the physician's office. Many of these conditions are amenable to a positive program of conservative treatment.

The subjects to be covered include cervical arthritis, bursitis, low back pain, painful feet and degenerative arthritis. In each instance the presentation will emphasize the salient features of diagnosis, and a plan of therapy will be given. Appropriate clinical material will be presented in demonstration form. The luncheon will offer a panel representing the medical and legal aspects of injury cases. The afternoon program will include discussion of the common problems of feet and legs in children, to include pes planus, metatarsus varus, femoral torsion, dysplasia of the hips and painful epiphyseal growth disturbances. The course is approved for 7 hours of Category I credit by the American Academy of General practice. Tuition is \$15.00 which includes the luncheon. For further information address the Department of Postgraduate Instruction, Vanderbilt University School of Medicine.

Residencies in Experimental Medicine

The Medical Division of Oak Ridge Institute of Nuclear Studies announces appointments will be made for the year beginning July 1, 1961. A position as postresident assistant in Internal Medicine, similar to one that has been offered previously in radiology, has also been set up. Anyone interested may write Dr. Ralph M. Kniseley, Chief of Clinical Research and Training, Box 117, Oak Ridge, Tennessee.

Middle Tennessee Heart Association

A booklet is offered for parents of children having congenital heart disease. The title is "If Your Child Has a Congenital Heart Defect."

The Southeastern Surgical Congress

The 29th Annual Assembly will be held March 6-9, at the Deauville Hotel, Miami Beach. Speakers from all parts of the country will appear on the program.

Postgraduate Education in Tennessee

"SOME ASPECTS OF INDUSTRIAL MEDICINE FOR THE PRACTICING PHYSICIAN."

This will be the first of three programs to be presented in 1961 by the TSMA Committee on Postgraduate Education. Place and Dates below:

Paris	Feb. 22	Gallatin	Mar. 7	Cleveland	Mar. 22
Jackson	Feb. 23	Cookeville	Mar. 8	Knoxville	Mar. 23
Dyersburg	Feb. 24	Lawrenceburg	Mar. 9	Johnson City	Mar. 24
		Tullahoma	Mar. 10		

Four papers will be presented by outstanding men followed by a Panel Discussion "WHEN SHOULD MY PATIENT RETURN TO WORK." This will be a four hour evening session (4:00 to 9:00 PM) with one hour break for dinner (dutch). Brochures with complete information will be in the mail very shortly.

\$10.00 enrollment entitles you to attend all three 1961 programs. Fill out the enrollment form at bottom of page and return, with check, to: Committee on Postgraduate Education, Tennessee State Medical Association, 112 Louise Avenue, Nashville 5, Tennessee.

"APPROACHES TO COMMON ORTHOPEDIC OFFICE PROBLEMS" sponsored by Vanderbilt University School of Medicine. Date—March 16th. For further information address: Dr. R. H. Kampmeier, Director, Postgraduate Instruction, Vanderbilt University School of Medicine, Nashville 5, Tennessee.

Following will be offered by University of Tennessee College of Medicine:

"FRACTURES AND DISLOCATIONS"	Mar. 1-3
"PEDIATRICS"	Mar. 6-10
"ANESTHESIOLOGY FOR THE GENERAL PRACTITIONER"	Mar. 15-17
"ELECTROCARDIOGRAPHY"	Mar. 20-24

For further information communicate with: Postgraduate Department, 62 South Dunlap, Memphis 3, Tennessee.

TENNESSEE STATE MEDICAL ASSOCIATION COMMITTEE ON POSTGRADUATE EDUCATION

112 Louise Avenue

Nashville 5, Tenn.

Date_____1961

Register me for the postgraduate education programs to be presented in 1961.

Attached is my enrollment fee for 1961.

NAME_____M.D.

ADDRESS_____

Make checks payable to Tennessee State Medical Assn.

PLACEMENT SERVICE

The Placement Service of the Tennessee State Medical Association is designed to assist doctors and communities to get together. Further information and contacts on both physicians and communities are available from the Public Service Office, 112 Louise Avenue, Nashville, 5, Tennessee.

Locations Wanted

A 26 year old married physician desires clinical or group-type general practice in east Tennessee community of 5,000-25,000. Lutheran. Graduate Medical College of Virginia. Available immediately. LW-368

A 37 year old married physician desires private practice in general surgery in Tennessee community of 20,000 to 50,000. Will consider assistant or associate practice. Methodist. Graduate University of Tennessee. Available immediately. LW-373

A 30 year old married physician desires to locate in east Tennessee community of 35,000-100,000 to establish practice in pathology. Will consider assistant or associate practice. Protestant. Graduate Jefferson Medical College of Philadelphia. Available July 1961. LW-384

A 26 year old single general practitioner desires to locate in middle or west Tennessee community of 5,000-10,000. Will consider clinical practice. Methodist. Graduate University of Tennessee. Available August 1961. LW-386

A 34 year old married physician wishes to establish general practice in east or middle Tennessee community of 10,000 or over. Will consider clinical practice. Methodist. Graduate University of Tennessee. Available immediately. LW-389

A 35 year old married physician wishes to locate in east or middle Tennessee community 8,000-10,000 in the practice of internal medicine. Will consider assistant, associate or institutional practice. Protestant. Graduate University of Colorado. Available immediately. LW-390

A 32 year old married physician wishes to establish general practice in west Tennessee community of 7,000-40,000. Methodist. Graduate University of Mississippi. Available immediately. LW-393

A 30 year old married physician desires to establish practice in internal medicine in west or middle Tennessee community of 65,000 or over. Will consider clinical, assistant or associate practice. Catholic. Graduate University of Cincinnati, Certificate Part I, American Board Internal Medicine. Available July 1961. LW-394

A 33 year old married general practitioner wishes to locate in Tennessee community of 4,000-40,000. Will consider assistant or associate practice. Church of Christ. Graduate University of Mississippi School of Medicine. Available July 1961. LW-395

A 44 year old physician wishes to relocate in middle Tennessee practice in associate, assistant, or institutional (preferred) practice. Methodist. Graduate Vanderbilt School of Medicine. Available February 1961. LW-396

A 55 year old married general practitioner with four and one-half years residency wishes to locate in Tennessee community of 1,000 or over. Catholic. Graduate University of Santa Tomas, College of Medicine, Philippine Islands. Available immediately. LW-397

Physicians Wanted

Physician in middle Tennessee town of 200,000 desires associate general practitioner. Office space and equipment available. PW-130

Physician in east Tennessee community of 6,000 desires associate general practitioner, age 25-35 with one year internship. New private office, examining rooms and equipment available. Hospital located in community. PW-134

Middle Tennessee community of 8,000 in need of a physician in the field of internal medicine. Must have two years internship and one year residency training. Office space located near newly built hospital. PW-136

Physician wanted in middle Tennessee community of 12,000 to assume established practice of M.D. who is leaving. Two 25-bed open staff hospitals and completely equipped office. Good churches and schools. Close to good recreational area. Good agriculture and small industry area. PW-140

Southern Tennessee community of slightly over 500 in need of general practitioner. No other physician in community. Office space and some equipment available. PW-147

Physician in large west Tennessee town desires an associate GP. Completely furnished office available. PW-148

East Tennessee community of 1,000 desires general practitioner. One other doctor in community. Office space and equipment will be provided to suit physician. Forty bed hospital located in community. PW-149

Otolaryngologist or ear, eye, nose and throat physician to purchase practice, after brief association with present owner, who is reentering government service. Minimum amount of cash required of right party. PW-152

For Sale by physician, very modern clinic with x-ray, EKG., etc., in small eastern Tennessee community to one or two physicians. Present owner leaving to enter Surgical Residency. Good income. PW-155

Physician in mid-eastern Tennessee town of 7,000 wishes to locate physician to assume temporary (one or two years) handling of his practice. Rental basis for office and equipment. Physician is entering residency training. PW-157

The author reviews the true undescended testis in terms of prognosis as regards its physiologic function and further development after operation. There is little proof, apparently, that it becomes a functioning organ.

An Evaluation of Therapy For The Undescended Testis*

CHARLES E. REA, M.D.,† St. Paul, Minn.

The purpose of this paper is to evaluate treatment of undescended testis, especially the end results.

The undescended testis is not an uncommon abnormality. One out of every 500 men have a retained gonad.

The whole philosophy of the treatment of the undescended testis hinges on whether the surgeon believes that the undescended testis fails to reach the scrotum because of a inherited imperfection, or because of its situation the testis become atrophic. Philosophically, everything in this world varies from gross imperfection to perfection. In the case of the undescended testis, we see variations from anorchia to grossly normal-appearing cryptorchids. Thus both views of why the ectopic testis is imperfect have some truth to them. Those who believe in operating upon the undescended testis must believe that the abnormal position has something to do with the testicular mal-development. It is well known that it is impossible to distinguish between a normal and retained testis if the subject is below the age of puberty. With the onset of puberty, however, the normal testis shows a marked increase of weight which is due to the elaboration of mature epithelium and to the appearance of spermatozoa. The undescended

testis exhibits these changes to a lesser degree. Spermatozoa are rarely, if ever, found in the seminiferous tubules of a testis retained after puberty. The histologic picture of an abdominal gonad is often indistinguishable from that of an inguinal testis. The time factor is probably as important as the degree of descent in determining the histologic picture, barring any congenital malformation.

Concerning the incidence of malignancy in the undescended testis, there has been much discussion. It is generally agreed that 10% of malignancy of the testis will occur in the undescended testis. However, the actual percentage of undescended testes that undergo malignant generation is another question and a phase most commonly overlooked in the discussion of this subject. It is interesting that in polling the 662 members of the American Urological Association, 72% of the urologists had never personally seen or treated a malignancy of an imperfectly descended testis. In a review of the literature, it would seem that about 2 to 3% of undescended testes may become malignant, which is not much higher than the incidence of carcinoma of the normal breast. Thus, the indiscriminate castration of cryptorchids for fear of malignancy is contraindicated. Moreover, bringing the testicle into the scrotum does not protect against development of malignancy, but bringing the testicle into the scrotum at least permits

*Presented as the First Dwight E. Clark Memorial Lecture September 28, 1960 at Oak Ridge, Tenn.

†Professor of Clinical Surgery, University of Minnesota Medical School, Minneapolis, Minn.

it to be examined should there be any malignant changes.

The undescended testis does have an internal secretion. It is stated that one-sixteenth of the normal testis suffices to protect normal development of secondary sex characters in the rabbit and guinea pig. Judging from the small size of the gonads, occasionally seen in the otherwise normal cryptorchids, little testicular tissue seems to be needed to carry on this function in man.

Placing the testicle in the scrotum does not seem to increase the endocrine function, as far as secondary sex characters are concerned.

Fertility in the Undescended Testis

In a review of literature we can find all ranges of opinion as to whether cryptorchids are fertile. Some say the undescended testis is incapable of producing spermatozoa while others say it can occur. In reading the literature one must be careful that the age of the patient is stated, whether the patient had unilateral or bilateral undescended testes, whether the author could determine between pseudocryptorchidism or true mal-descent. It is known that the higher temperatures of the inguinal canal are inimical to spermatogenesis. One difficulty with the experimental work of this type is that usually normal descended testes have been used as experimental subjects. That is, the testes have been put up into the abdomen, allowed to degenerate and then brought down into the scrotum again, to see how much regeneration would take place. The difficulty with this type of experiment is that testes have a normal potentiality to start with.

In a control series, one would have to know what percentage of untreated cryptorchids show spermatozoa. Uffreduzzi¹ stated that 10% of cryptorchids exhibit spermatozoa. If one critically reviews these statistics, however, most of them are opinions rather than proven facts. Certainly in the untreated cryptorchid in the third and fourth decade the finding of spermatozoa must be very rare indeed.

Treatment

Spontaneous descent. Before any type of surgery is evaluated, a control series is nec-

essary. It is important, therefore, to know what the incidence of spontaneous descent of the undescended testis is. Hofstatter² stated that in 600 male newborn children, 96% of the testis were in the scrotum. In eight to ten days nearly all the testes were in the scrotum or slipped out of the external ring easily. To be sure, there are several reports of late descent in the literature (Buhlmann,³ Mayor,⁴ Harris,⁵ Drake⁶). The most interesting of these studies is that of Drake. He found that 11 of 260 boys, aged 9 to 19 years, had undescended testes (incidence 4.2%); in 4 the retained gonad was on the right side, in 6 it was on the left and in 1 the condition was bilateral. Drake observed these boys for a period of years and found that 10 of the 12 testes descended spontaneously. If most undescended testes descend of their own accord, as Drake inferred, it is difficult to explain the incidence of 3.1 cases of ectopy per thousand men according to the draft statistics. Also, since the incidence is about twenty times the normal incidence (0.2%) it is possible that the condition in a number of his cases could be classified as physiologic ectopy.

By physiologic ectopy is meant the condition in which one finds a normally descended testis with a very short or active cremasteric muscle which pulls the gonad into an inguinal or a high scrotal position. This condition, also known as ectopy *en retour*, has been little appreciated by most investigators. From the point of view of therapy, it is as important to differentiate it from true mal-descent of the testis as it is to differentiate testicular mal-descent from hernia, from benign and malignant tumors in this region or from adenitis.

MacCollum⁷ noted 21 instances of physiologic ectopy in 336 cases of cryptorchidism. Of 16 patients referred to Hamilton and Hubert⁸ only 6 were actually cryptorchids; 10 were pseudocryptorchids. Stefko,⁹ in 1924, reported a high incidence (27%) of inguinal testes in starving children. This he attributed to shortness of the cremaster, caused by starvation, in which an unequal growth of muscles of the abdominal wall occurs. Hofstatter described a group of 8 to 10 year old boys who could luxate their testis, pushing them into the inguinal canal and even into the abdominal cavity. On one occa-

sion, one of these boys could not replace a testicle which he had pushed above the penis, and only with difficulty could it be replaced by a physician. Bevan¹⁰ stated that one fourth of the patients with retained testis referred to him do not have undescended testis, for when a finger is run down the inguinal region the testicle can be pushed into the scrotum. To differentiate physiologic ectopy from testicular retention the following criteria may be helpful: (1) In physiologic ectopy the extremely short or active cremaster may be seen to contract. (2) The patient may state that at one time the testis was in the scrotum. (3) Physiologic ectopy is not associated with hernia as frequently as undescended testis. (4) In physiologic ectopy the testicle can be brought into the scrotum by manual traction, but when the traction is released the testicle recedes to its original position. (5) The scrotum in such cases is better developed than in cases of cryptorchidism. (6) In children with strong cremasteric reflexes the testis does not usually enter the inguinal canal but lies under cover of the loose fatty tissue which covers the front of the pubes. If the examiner palpates the region immediately below the external ring, the cord can be picked up by the fingers. When this is traced, the testis will be found. (Fraser¹¹). (7) If relaxation of the cremasteric and other muscles is obtained by a general method of approach and by direct application of heat to the groin, scrotum and perineum (the patient lying with his legs apart) a differentiation between pseudocryptorchidism and true cryptorchidism can be made (Hamilton and Hubert).

The ultimate fate of physiologically ectopic testes is that nearly all finally descend into the scrotum, will develop normally, and are functional. No treatment is necessary.

Endocrine Therapy

Up to the past few years endocrine therapy for the undescended testes was quite popular. At the present time, however, it is rarely used. The whole rationale was chiefly from the work of Engle.¹² He found that injections of the extracts of urine from pregnant women and water-soluble extracts of the anterior lobe of the pituitary gland produced descent of the testes in 10 imma-

ture macaques. Normally the male macaque exhibits at birth turgescence of the scrotum and descended testes. Shortly after birth the testes ascend into the inguinal ring, while the scrotum regresses until it becomes a flattened fold of skin between the thighs. Not until the third to the fifth years do the testes descend again permanently, at which time the scrotum becomes fully formed (Wislocki¹³). In the monkeys treated by Engle the testes grew, and during the course of treatment the scrotum increased in size even before the testes had descended into it. The author noted the similarity between the scrotal response in monkeys and that in newborn human children. Since in the human male the testes are descended at birth and in the human female the gonodotropic principle is in the circulation throughout the period of gestation, Engle postulated that the hormone is involved in the descent of the testes in the human male.

It is hard to explain how there can be an endocrine disorder in undescended testis when only one testicle is involved. While in the literature there have been reports of descent using an anterior pituitary-like substance, it is questionable in most of these cases whether the authors differentiated between pseudocryptorchidism and the true mal-descent. There is no question that in cases of pseudocryptorchidism the testes can be brought down into the scrotum much earlier by means of gonadotropic substance, but since most of these testes will spontaneously descend themselves at the time of puberty, it is questioned how necessary this type of treatment is. In the treatment of cryptorchids we have not used hormone therapy in the last ten years. We have seen no value of hormone therapy in the operative procedure. There have been just as many obstructions holding the testis back, whether or not the patient had hormone therapy.

Surgical Therapy

The best treatment for the undescended testis is surgical placement of the testicle into the scrotum. The time of operation is to be taken into consideration. Our impression is, that inasmuch as there is no physiologic or anatomic development of the testi-

cle until puberty, operation may be deferred until the patient is 9 to 11 years of age. Also, this gives an opportunity for the testis in questionable pseudocryptorchid to descend. Recently some authors have advocated the operation at the age of 5 to 7 years, believing they get a better result. There is no histologic proof that these testes develop any better than those operated on at a later date. Also, there is the bad feature that if one operates before the testicle is of pubertal size, one is operating upon a small bean-like structure and any sutures placed in this organ probably do more damage than good. Unless there is a large hernia, danger of malignancy or torsion of the testicle, we have deferred operating on the undescended testicle until just before puberty.

At the time of operation, what is done depends very much on the situation present. If the patient has bilateral undescended testes, the testes should be placed in the scrotum at all costs to preserve the internal secretion. If a low scrotal position cannot be obtained, such testis should be brought to an inguinal or high scrotal position. To place such a testis in the peritoneal cavity from an inguinal position if it cannot be brought into the scrotum does not improve matters. In fact, the situation becomes worse because the testis is that much less available for observation.

If it is a unilateral cryptorchid, what is done, depends on the size of the testicle. If it is a small nubbin of tissue, such gonads cannot possibly develop and are best removed. Placing them in the scrotum, even for the hormonal benefit is a questionable practice. To expect normal development of a small unilateral undescended testis in an adult is expecting the impossible. However, if the testicle is of good size and the patient is interested in the cosmetic result, then the testis should be brought into the scrotum. The best indication of what the testicle will do is its size, its location and the age of the patient.

Regarding surgical therapy, the most popular operations consist of two types: One is the rubber-band tension method and the other is fixing the testicle to the thigh by means of suture, so called Keetley-Torek or Wangenstein's modification. In the rubber band type of operation, the testicle is

made of sufficient length to bring it down into the scrotum, sutures are placed in the testicle and then tied onto a rubber band outside the scrotum; then the tension is placed on the rubber band on the thigh. The traction is kept there for about a week and then the traction removed. In the Keetley-Torek operation sutures are placed in the tunic vaginalis of the testicle, brought down through the tunica vaginalis communis of the scrotum and fastened to the fascia of the thigh. This is the Wangenstein¹⁴ modification. In the Keetley-Torek operation, the testicle is taken out of the scrotum and buried in the fascia of the thigh. When the testis has been anchored a sufficient length of time, about 4 to 6 weeks, the testicle is taken out of the thigh and replaced into the scrotum. The objection to Keetley-Torek operation is that it is not physiologic. Wangenstein's operation is much more physiologic because the testicle remains in the scrotum all the time. Some people have objected to the Keetley-Torek or Wangenstein modification because due to the unyielding nature of the anchorage of the testicle, they claim that the blood supply of the testicle is frequently impaired and the testicle atrophies. In any of these operations, it is necessary that no tension be placed on the cord, regardless of whether one uses the rubber band or one of the Keetley-Torek operations or Wangenstein modification. Moreover, if there is any injury to the cord, one can be sure that there is going to be atrophy of the testicle. Lately, we have been using the rubber band type of traction and will compare the results of these with the Wangenstein modification of the Keetley-Torek operation (under fertility).

Results of Treatment

A. *Anatomic.* From an anatomic viewpoint, considering consistency, contour, sensitivity and position of the testis, about 90% of the patients operated upon may be said to get good results. In the majority of patients operated upon, the testis rarely attains normal size. If a testis is small to start with it does not develop much when brought into the scrotum. If one has damaged the blood supply during the course of operation the testicle will atrophy. Placing

the undescended testicle in the scrotum does not insure against future malignant degeneration, but this must be a rare occurrence. I have only seen one case where this occurred. If it is necessary to remove the testicle, it is our practice, at the time of operation to put a Lucite "testis" of comparable size on that side of the scrotum, for cosmetic purposes. Occasionally these patients complain of pain on the side of the prosthesis when it is cold, because of the contraction of the scrotum; otherwise, they have very little disability and the psychologic effect of the prosthesis is sometime considerable.

B. Fertility. Fertility after orchiopexy. MacCollum, in 1925, found that 82% of bilateral cryptorchids were fertile after operation upon studying the sperm count. On the other hand, Charny¹⁵ and others were so pessimistic about the increasing fertility of the orchiopexy that they thought that surgical treatment was useless. In 1935, Wangenstein¹⁶ reported 6 patients with bilateral descent in which spermatozoa was found in the semen after orchiopexy. In no case, was the number of spermatozoa as high as in a normal person. Now recently, Gross and Jewitt¹⁷ reported 16 men who were operated on for bilateral cryptorchidism. Two were 7 years of age and the remaining were from 8 to 12 years of age. The time between the operation and the fertility studies were 7 to 10 years in 6 patients, and 11 to 20 in 4 patients, and 20 to 33 in 6 patients. The men who were married and had children were regarded as fertile, and that was in 7. In the remaining 9 men, careful sperm studies were made. If to the 7 who had had children were added to the 5 with exceptionally high sperm count, this gave a total of 12 fertile individuals in the 16 studies, (fertility rate, 75%). Of the 4 patients known to be sterile; one was a patient on whom the left testis could not be brought down into the scrotum and the vas deferens was torn at operation. In the other 3 cases, 5 of the 6 testes were said to be atrophic in appearance, when exposed in surgical field. When one combines Gross' and Jewitt's studies with that of MacCollum, inasmuch as the work was done at the same institution, of the 38 men studies, 30 were fertile, giving an overall fertility of 79 per

cent. One might question the figures of Gross and Jewitt in that 5 patients had exceptionally high sperm counts and in 10 of the bilateral cases the testes, at operation, were described as normal. Just what is meant "by normal," of course, may be questioned; if it is meant normal in size, one wonders if these patients may have been pseudocryptorchids and not true undescended testis. The sperm counts, after orchiopexy, certainly are much higher than have been reported in other cases of literature.

We have studied 11 patients, to date, who were operated on for bilateral cryptorchidism by orchiopexy more than ten years previously. Eight of these were by Wangenstein's modification of the Keetley-Torek operation and 3 of these by the rubber band traction method. These men ranged in ages, now, from 22 to 40 years of age. All of them had been married for a period of 6 months to 7 years. In no instance had the wife become pregnant. All stated that they were potent. The testes, in each case, were in the scrotum but none were of normal size; they were all about one-third to one-half of the normal dimensions. Eight of these patients have submitted to testicle biopsy, 5 with the Wangenstein modification of the Keetley-Torek operation and 3 with the rubber band traction method. All the testes showed atrophic germinal epithelium and no spermatozoa was seen in the sections. Here we have two types of operation in which the same type of results are obtained. Thus, one cannot blame the type of operation. As we have stressed, the operation must be done without tension to the testicle or injury to the blood supply of the cord. If these details of operation are observed, then how the testicle develops depends upon its inherent potentialities.

Summary

Our present plan of treatment of a patient with undescended testis is as follows: We wait until the patient is 10 to 14 years of age before instituting treatment. At operation we try to bring the testicle down into the scrotum. This must be done without tension to the testicle and without injury to the blood supply, regardless of the type of operation. If it is a bilateral crypt-

orchid the testis should be saved at almost any cost, barring malignancy, for the sake of the internal secretions. If it is a unilateral instance and the testicle is very small, or just a nubbin of a tissue, the testis had better be removed, especially in an adult. Our results to date with fertility studies have been most disappointing. I think some of the good results reported in the literature have been in patients in whom there has been confusion between true mal-descent and pseudocryptorchidism, especially when one considers the size of the testis and sperm count reported after operation. The only true test of what will happen to the undescended testis is the biopsy after orchiopexy. If there is atrophy following operation, very little in the way of a functional result can be expected. At best, the functional capacity of the treated cryptorchid never approaches that of the normally descended testis.

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The author after discussing the complication of inadvertently tying the ureter in pelvic surgery, suggests the use of an intravenous pyelogram several days postoperatively to demonstrate patency of the ureters.

Report On A Series of Hysterectomies: With Particular Reference to Complications in the Urinary Tract*

JAMES T. JACKSON, M.D., Dickson, Tenn.

Injuries to the bladder and ureters cause serious complications following hysterectomies. It is thought by many that these complications are due to the advent of total hysterectomy and to the radical procedures done for carcinoma. During the past decade, total hysterectomy has become the procedure of choice when hysterectomy is indicated for benign uterine disease. Not many years ago total hysterectomy was an uncommon procedure.

Total hysterectomy carries an added threat to the ureters and bladder. According to urologists, there has been a rather sharp upswing in the incidence of damage to the ureter and bladder since the advent of total hysterectomy. The most common complication in the urinary tract is the development of ureteral fistula. Either ureteral or a vesical fistula is very distressing to the patient and the physician. The ureteral complication occurs frequently enough that some urologists recommend that in all cases catheters should be placed in the ureters prior to operation. Other urologists recommend that indwelling ureteral catheters be used in all cases where difficulty is anticipated.

In an effort to determine the incidence of damage to ureters or bladder in hysterectomy, I have compiled the series of cases being reported upon. It represents 157 consecutive hysterectomies done by the same surgeon in the same hospital over a two and one-half year period. These cases are taken from a larger series. Only the cases are included that were consecutive and in which operations were done since a radiologist has been on the hospital staff. In all cases a postoperative intravenous pyelogram has been done, generally on the fifth day. It was thought that any significant

damage to the ureters would thus be uncovered. It was also believed that an I.V.P. was necessary for the study, since a securely tied ureter generally causes no symptoms. All cases represent a follow-up of at least 6 weeks.

Table 1 presents general information concerning the series of cases.

Table 1

Number of cases	157
Anesthetic, General	35
Anesthetic, Spinal	122
Mortality	0

Table 2 provides the primary diagnosis in each case. Only the pathologic diagnosis has been considered. For example, prolapse of the uterus is a fairly common clinical reason for hysterectomy; yet it is not listed. Frequently associated with prolapse of the uterus will be several pathologic changes resulting in the pathologic picture of "fibrosis uteri." At operation, the diagnosis "fibrosis uteri" represents a retroverted, prolapsed, thickened and enlarged uterus covered with fibrinous plaques. Clinically, it is characterized by pain and bleeding. Pelvic inflammatory disease is not, strictly speaking, a pathologic diagnosis. For sake of brevity, it is used to cover wide ranges of

Table 2

Fibroid tumors	48
Fibrosis uteri	33
Pelvic inflammatory disease	32
Endometriosis	15
Dermoid cysts, ovaries	1
Chronic cervicitis	2
Ectopic tubal pregnancy	1
Ovarian carcinoma	1
Carcinoma corpus uteri	3
Adenomyosis	9
Placental polyp	1
Placenta accreta	1
Cystadenoma ovari	2
Endometrial polyp	4
Atrophic uterus (total prolapse)	3

Total 157

inflammatory conditions affecting the pelvic organs. For example, a low-grade salpingo-oophoritis would be included under this heading, as would more severe tubo-ovarian abscesses or a pyosalpinx. Again, for sake of brevity, multiple secondary or intercurrent pathologic conditions were not included.

Table 3 lists the operative procedures carried out. None of the hysterectomies was the radical Wertheim type. Simultaneous removal of one or more ovaries was listed, because it also carried a theoretical threat of damage to the ureters at the pelvic brim.

Table 3

Total hysterectomy	146
Supravaginal hysterectomy	11
Simultaneous removal of one or more ovaries during hysterectomy	107

Table 4 describes complications during the first 6 weeks.

Table 4

Blocked ureter	1
Septic wound infection	1
Aspiration pneumonia	2
Vaginal hemorrhage	1
Hemorrhage from cervical stump	1
Intra-abdominal hemorrhage	1

It should be noted that no instances of phlebothrombosis occurred. I believe this is a direct result of vigilant attention to leg exercises. Superficial thrombophlebitis from venopuncture, reaction to catgut in the wound, vaginitis, and formation of vaginal granulation tissue were not listed as complications.

The patient who had the blocked ureter had multiple fibroid tumors. One tumor was in the lower uterine segment and had dissected into the left broad ligament. In performing a total hysterectomy, bleeding developed in the left broad ligament, and was controlled with some difficulty. Postoperatively the patient had more distention than usual and complained of low left flank pain. An I.V.P. done on the fourth day revealed no function in the left kidney. A retrograde pyelogram demonstrated an obstruction to the left ureter about 2 inches from the vesical orifice of the ureter. The abdomen was again opened the next day, and the ureter was exposed retroperitoneally. It was found to be caught by two or three catgut sutures which were removed. The posterior wall of the ureter was intact.

A catheter was placed in the ureter as a splint. The anterior wall of the ureter was reapproximated with one catgut suture. Drains were placed down to the area. The patient's postoperative course was uneventful. An I.V.P. made one year later showed a normal ureter and kidney. This patient would undoubtedly have developed a ureteral fistula. The postoperative I.V.P. provided such early detection of the complication so prompt repair was possible.

I have reviewed the literature to determine what would be considered an acceptable incidence of major damage to the urinary tract resulting from hysterectomy. Reports of personal series are scarce on the subject. *Lewis's Practice of Surgery* has a new section on hysterectomy, dealing with the subject in detail. According to this source an incidence of 2% can be expected in benign uterine conditions requiring hysterectomy; an incidence of 10% can be anticipated in the more radical procedures done for carcinoma. Again referring to *Lewis's Practice of Surgery*, ureteral damage occurs almost solely following total hysterectomy.

I do not intend to go into the merits of total versus supravaginal hysterectomy. It may be noted from this reported series that some supravaginal hysterectomies were done. In general, I believe that when the patient's condition is poor, difficulties in anesthesia arise, or exposure is too difficult, one should consider doing a supravaginal hysterectomy. The risk of a carcinoma developing in the cervical stump is said to be under 0.5 per cent.

Extensive endometriosis and pelvic inflammatory disease are two conditions which make removal of the cervix difficult and increase the hazard of damage to the ureters. The induration and distortion of the pelvic floor make the location of the ureters difficult. In such cases I recommend that a low supravaginal hysterectomy first be done. Then the cervix is split vertically into halves. A towel clip is used to grasp one of the cervical halves. The half of the cervix is then inverted so the cuff of the vaginal mucosa attaching to the cervix is seen. Scissors are then used to cut around the junction of the mucosa to the cervix. The same procedure is then used on the

other half of the cervix. In other words, instead of hulling out the cervix from the outside of the vagina, it is hulled out from the inside. This maneuver completely removes the chance of sectioning a ureter running close to the cervix. It also does away with the necessity of dissecting adherent viscera out of the cul-de-sac.

Summary and Conclusion

A series of hysterectomies in which a strict study was made to discover the incidence of damage to the urinary tract is re-

ported. No vesicovaginal fistulas occurred. One blocked ureter was discovered, representing an incidence of less than 0.75 per cent. It is recommended that postoperative intravenous pyelogram be done on all patients when the surgeon is uneasy concerning the ureters. By doing so, the development of fistulas can be prevented.

A technic for removal of the cervix in certain difficult cases is described.

It is hoped that this article will stimulate more reports on personal series of cases on this subject.

Differential Characteristics of Low Tension Glaucoma*

ALICE R. DEUTSCH, M.D., Memphis, Tenn.

The vulnerability of the individual optic nerves to damage by a particular intraocular pressure remains one of the most important challenges facing investigators and clinicians concerned with the management of the glaucomas. Harrington¹ made the observation that patients with glaucoma and generalized arteriosclerosis exhibited the most extensive and rapid loss of fields even if the intraocular tension was only moderately raised, and he referred this loss in visual fields to arterial insufficiency and decreased blood flow in the arterioles of the optic nerve. McLean² discussed the relationship between the level of systemic blood pressure and tolerable intraocular pressure. He mentioned the case of a glaucoma patient who was well controlled for a long period, but nevertheless suffered a considerable loss of fields under the same intraocular pressure when the systemic blood pressure was drastically lowered by medication. In a magnificent study, Francois and Neetens³ could demonstrate that the central artery of the optic nerve formed the axial nutritional system of the optic nerve, that there were capillary anastomosis between this artery and the pial network supplying the peripheral nerve tissue, and also inter-communication with the circle of Zinn-Haller. These extraocular arterioles and capillaries provide the blood supply to the optic papilla. They are independent of the arteria centralis retinae which only serves the retina. According to a histopathologic investigation of 60 glaucoma eyes, Redslob⁴ found that in 60 eyes of primary glaucoma the retinal elements were fairly well preserved but that the optic disc was cupped and atrophic in 95% of these cases. Due to sclerosis of the arterioles and to stasis in the veins and capillaries alterations of circulation was a constant finding.

The resulting capillary sclerosis was considered to be the principal cause of the descending optic atrophy in glaucoma.

Further critical aspects of this problem revealed increasing evidence of the close relationship between intraocular vascular circulation, secretion of intraocular fluid, control by the autonomic nervous system and level of intraocular pressure. It was quite obvious that eyes with cupped discs did not tolerate the mildest excess in tension. Moreover, Becker⁵ called attention to the significant progressive decrease in average outflow facilities with age in association with a decline in the average rate of aqueous secretion. Those two facts maintain a reasonably constant pressure in normal eyes during life. Becker also stresses the significance of the Po/C ratio after W.P.T. Forty normotensive eyes in which the Po/C ratio was found to be higher than 100 were checked regularly for several years. Ten of those eyes had spontaneous pressure elevations after three years. Twelve eyes showed a decrease of out-flow facilities ($C = \text{less } 0.15$) and three showed visual field losses.

Two corresponding case histories are presented to illustrate the complexity of the glaucoma problem. Both patients had little or no elevation of tension, moderate cupping and atrophy of the disc, negative results on the routine provocative tests and more or less classical progressive visual field defects for glaucoma.

Case 1. Miss E. M., age 55 years, complained of blurred vision, especially while doing office work, at an eye examination in April, 1955. Her corrected vision equalled, o.d. 20/30 and Jaeger 4; o.s. 20/20 and Jaeger 1. ($\text{o.d.} = +3.25 = +.25 \times 30$, add +2.50; $\text{o.s.} = +2.75 = +.62 \times 160$, add +2.50). The position and motility of both eyes were normal. The media were clear. The pupils were round, equal and reacted sluggishly to light. Some narrowing and beading of the retinal arteries was present. There was a deep cupping of the right disc reaching the margin temporal and below, and considerable atrophy in this quadrant though there was a rim of appar-

*Read before the Tennessee Academy of Ophthalmology and Otolaryngology, April 11, 1960, Nashville, Tenn.

ently normal tissue in the other quadrants. There was also mild nasal displacement of the vessels. The left disc was normal. The right field showed a broad dense superior nerve-fiber scotoma with a break-through in the nasal quadrant with a very sharp dividing line in the vertical and horizontal meridian. There was a complete loss of the superior field for red. The left peripheral and central fields were normal except for a mild widening of the angioscotoma. (Fig. 1.) The intra-

A neurologic examination was advised because of the sharp vertical dividing line between the blind and functional parts in her right field, and because of the discrepancy in the white and color fields. The neurologic examination which included a lumbar puncture and x-ray of the skull was negative.

In spite of the negative provocation tests, she was advised to use 1% Iopto-carpine q.i.d. in the right eye. Under this treatment the tension

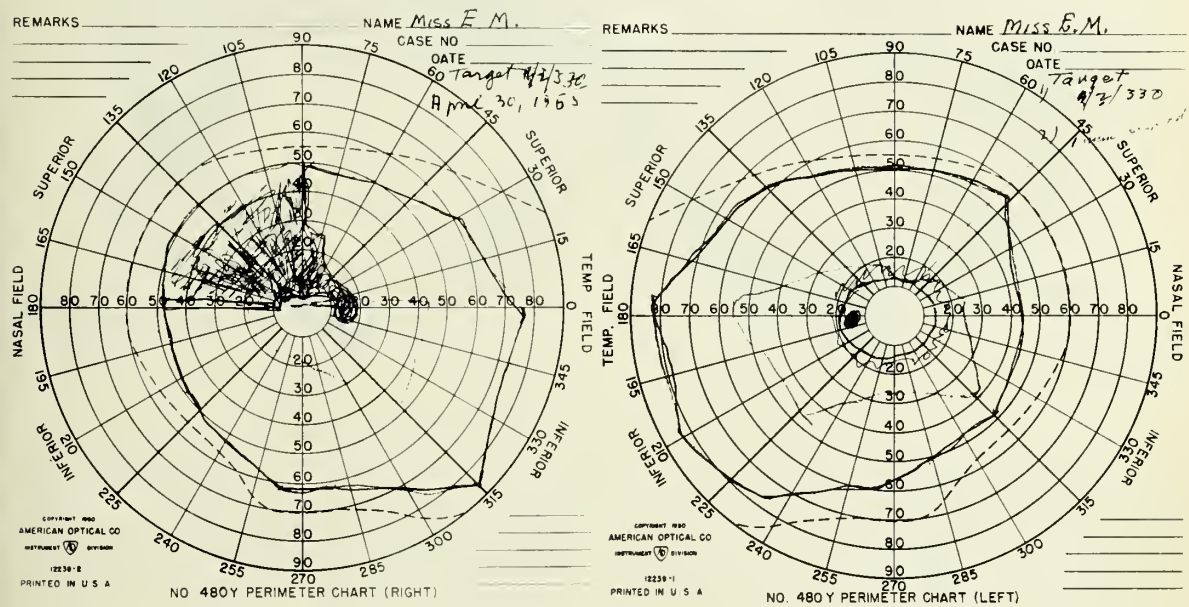


FIG. 1

ocular tension equalled o.d. = o.s. = 18.9 (5.5 g.); o.d. = o.s. = 18 (10.00 g.). Gonioscopy showed an open angle. W.P.T. was negative; tension curves during a 12 hour period revealed variations of 3 mm. Hg. in the right eye and none in the left. Blood pressure was 118/76 mm. Hg.; diastolic R.A.P. equalled 40 g. in both eyes.

changed very little and varied between 15.9 and 18.9 mm. Hg. She was advised to be seen about every four months, but she only came about once a year as she "had no complaints."

There was no change in her vision, fields and intraocular tension until June, 1958. At this time the right disc was much paler, the vision equalled

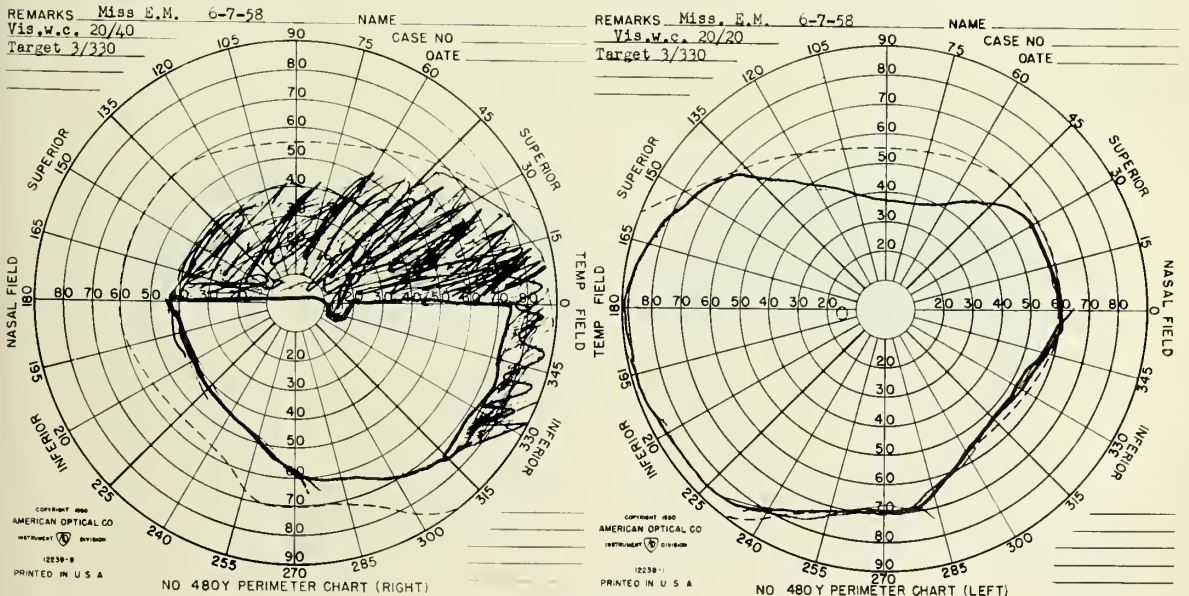


FIG. 2A

Miss E.M. 0-7-58

Vis.w.c.20/20 Target 2/1000

Vis.w.c.20/40

Target 3/1000

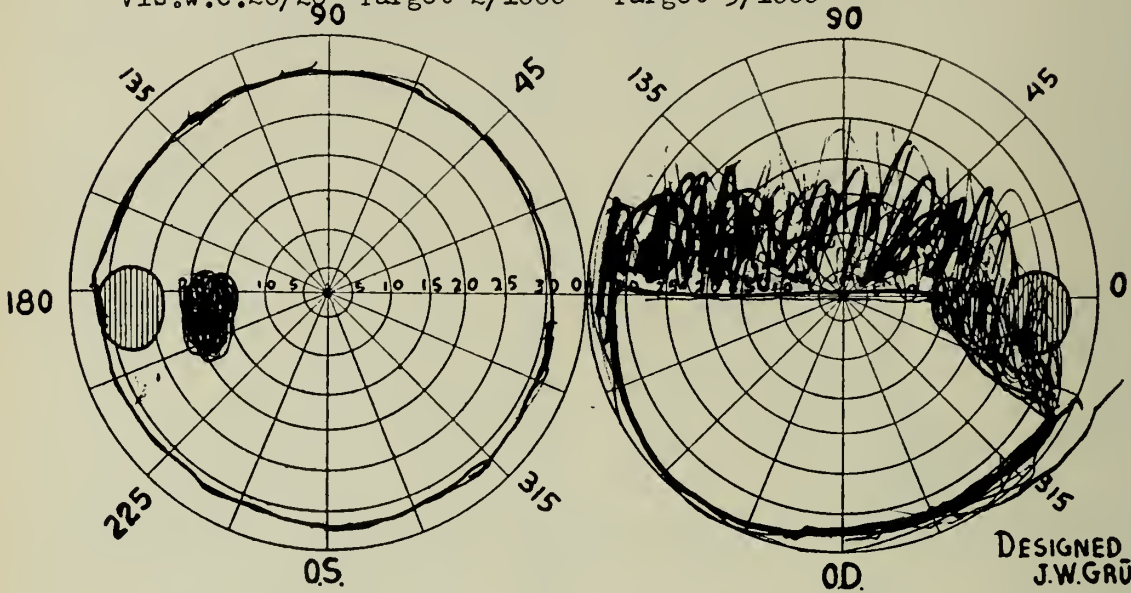


FIG. 2B

o.d. 20/40, o.s. 20/20 w.c. There was a complete loss of the superior field in the right eye and an increase in the size of the blind spot in the left eye. (Fig. 2.) The intraocular tension equalled o.d. 18.9 (5.5 g.) (Isopto-carpine 1% q.i.d.) and o.s. 20.6 (5.5 g.) (no medication). Gonioscopy again showed an open angle in each eye.

Regular tonogram:

o.d. P.O. = 16 mm. Hg. (5.5 g.) C = 0.18

o.s. P.O. = 23 mm. Hg. (7.5 g.) C = 0.11

The results of the tonogram confirmed the lesion, until then, only provisional diagnosis of a low tension glaucoma. She was advised to use 1% Isopto-carpine (pilocarpine Hcl) three times a day in both eyes and 2% Isopto-carpine at bedtime also in both eyes. When rechecked in July, 1959 the

tension was o.d. 17.3 and o.s. 15.9. When she returned in December, 1959, she had no complaints and the vision was unchanged. There was no essential further loss in the right field, but the left field showed a superior baring of the blind spot and a beginning nerve-fiber scotoma below. (Fig. 3.) The intraocular tension equalled, o.d. 17.3 and o.s. 17.3. In spite of this apparent normal tension she was advised to change to 2% Isopto-carpine four times a day and to have the tonogram repeated at her earliest convenience and subsequent adjustment of her treatment accordingly.

Case 2. Mrs. C. T. M., 65 years old, was seen in March, 1959. She had noticed defective vision for about 2 years and also had frequent headaches.

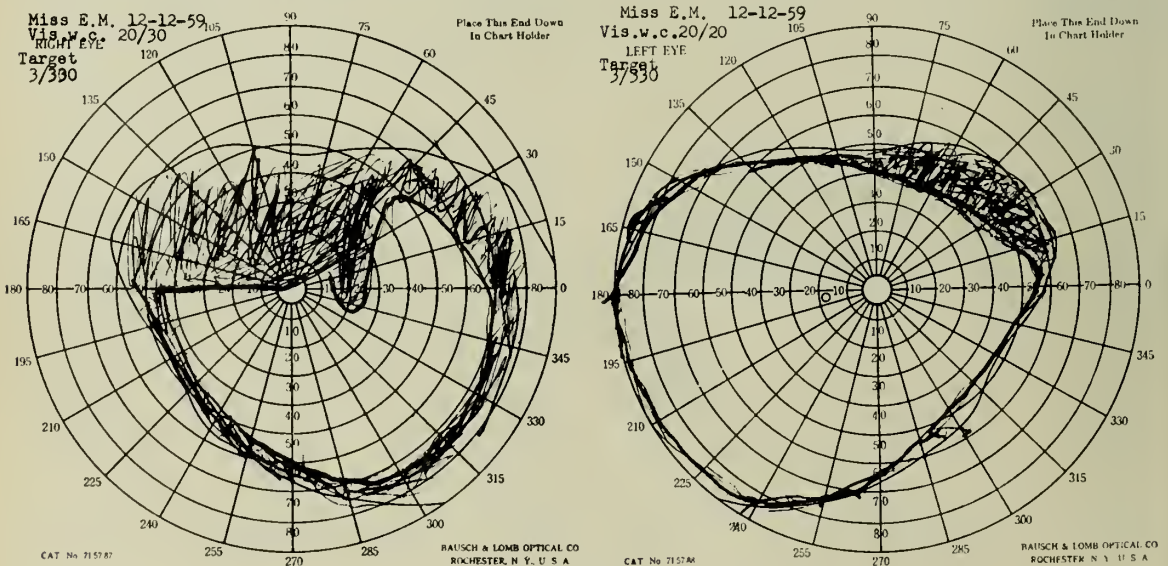


FIG. 3A

Miss E.M. 12/12/59
 Vis.w.c. 20/20 Target 2/1000
 Vis.w.c. 20/30 Target 3/1000

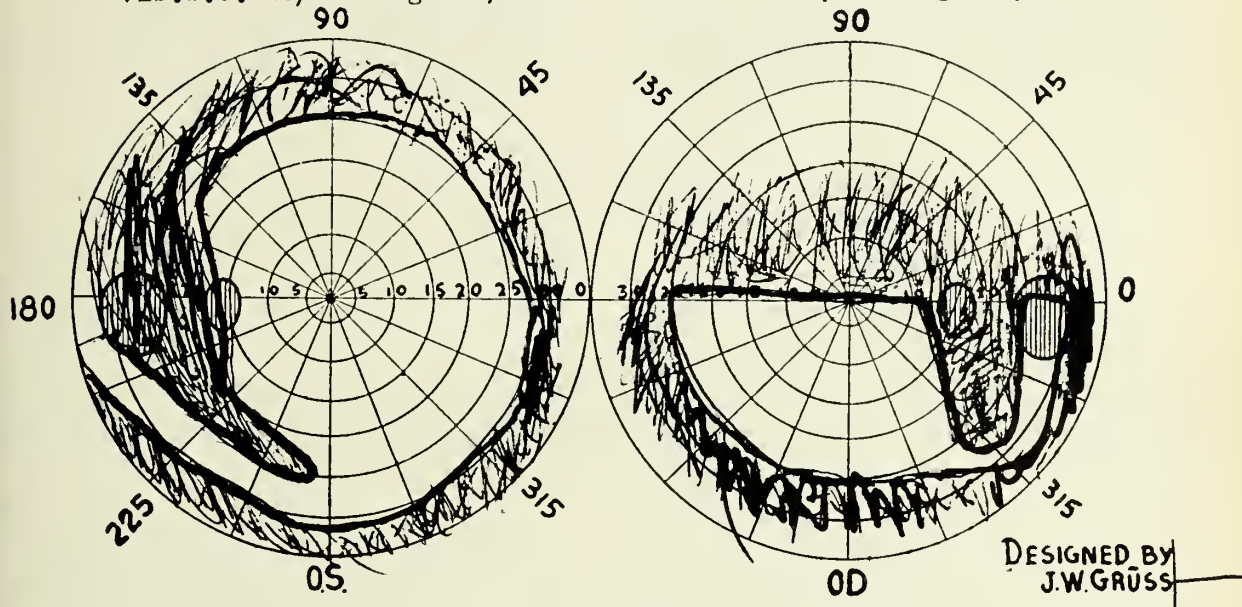


FIG. 3B

A physical examination only a few weeks previously was negative.

The ophthalmologic examination disclosed shallow anterior chambers and a pronounced nucleus-sclerosis. The discs appeared pale with a large flat cupping reaching the margins, temporally and below. The vision equalled o.d. $-4.50 = +2.75 \times 180 = 20/40$ add $+2.50$ Jaeger 4 and o.s. $-3.50 = +3.50 \times 25 = 20/40$, add $+2.50$, Jaeger 4. The right field showed an almost complete superior hemianopsia extending from the blind spot with a very sharp borderline; the left field had an extended superior nerve fiber bundle defect starting

at the blind spot and reaching the horizontal meridian on the nasal side. (Fig. 4.) The intraocular tension was, o.d. 20.6 and o.s. 22.4 (5.5 g.); o.d. 18.00 and o.s. 19.6 (10.00 g.), low scleral rigidity. On gonioscopy only the anterior trabecular band was visible, but the angle, though narrow, seemed to be open. The mydriatic test equalled, o.d. = 22.4 (raise of 2 mm. Hg.), o.s. = 24.4 (raise of 2 mm. Hg.). Water provocative test was negative.

In view of the appearance of the disc, the glaucoma type of field loss and the low scleral rigidity the diagnosis of chronic glaucoma was made and

Mrs.C.T.M. - Vis. w.c. 20/40 Target 2/1000
 Mar. 5, 1959 Vis.w.c. 20/50

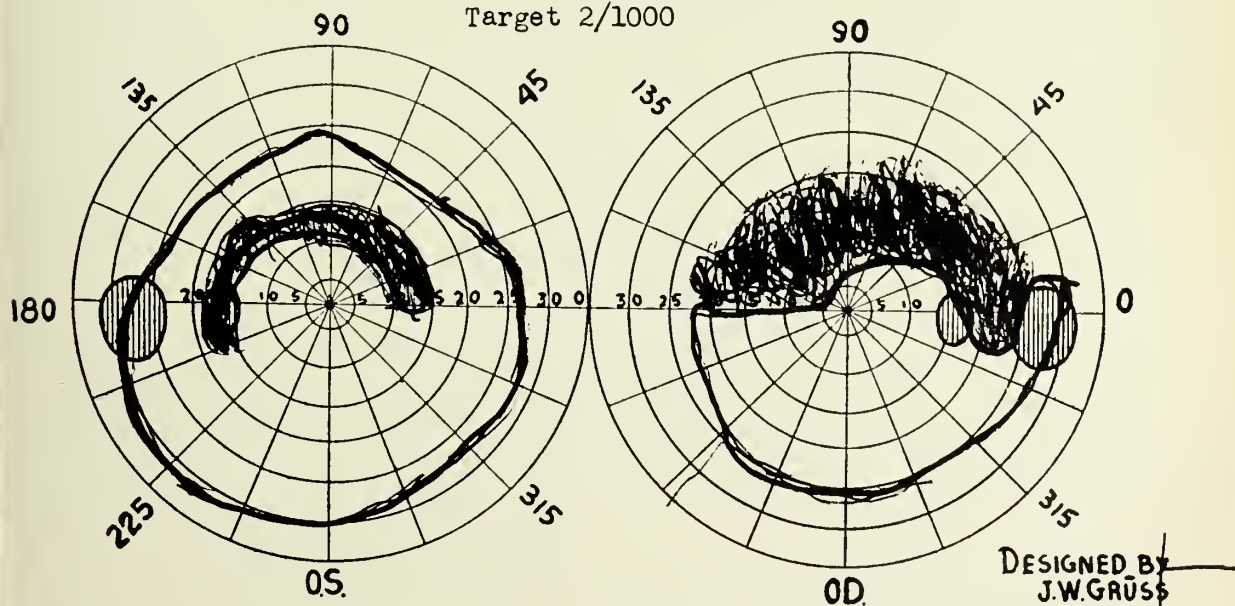


FIG. 4

she was advised to use 1% pilocarpine t.i.d. The tension was rechecked a few days later and revealed, o.d. 17.3 and o.s. 15.9 mm. Hg. In October, 1959, it was found to be o.d. 20.6 and o.s. 18.9. A regular tonogram was done 5 hours after the use of 1% pilocarpine. It revealed the following value: o.d. = $P_o = 18$ (5.5), $C = 0.15$, o.s. = $P_o = 20$ (5.5), $C = 0.18$.

In view of the low C values the treatment was changed to 2% Isopto-carpine (pilocarpine HCl) q.i.d. anticipating future necessary adjustment.

Discussion

These two clinical observations emphasize the intricacy in the diagnosis of the so called "low-tension glaucoma." It is erroneous to make the diagnosis only on the appearance of the optic disc. Even defects in the visual fields are not always typical, as demonstrated in the first patient. The pronounced loss of color perception in this case was more characteristic for field changes of optic atrophy than for field changes of glaucoma. Regular tonograms and tonograms after W.P.T. prove to be of great diagnostic value in doubtful cases. Intensive study of the metabolism and the function of the optic nerve will contribute to a more and more rational approach in the diagnosis and treatment of this treacherous disease. Most authors agree that the determination of absolute values in intraocular tension is not practical and that the limiting pressure which the individual nerve can withstand without increasing damage is occasionally much lower than so-called normal borderline values, especially in the presence of vascular changes in the optic nerve. Further loss can only be prevented if the intraocular tension is maintained on really low levels. The same is true for individuals with systemic hypertension and chronic glaucoma. Continuous revaluation of the intraocular pressure during treatment with bloodpressure depressants is indicated because of the delicate balance in between the arteries supplying the optic nerve and *tolerable* intraocular tension. Progression of glaucomatous field loss in apparently well controlled cases have been described while the systemic blood pressure was considerably lowered by specific medication.

Summary

- (1) Two cases of so-called low tension glaucoma were reported. The main

discriminating diagnostic points were outlined.

- (2) Some pertinent data from the literature was reviewed.

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Discussion

J. WESLEY McKINNEY, M.D., (Memphis)

I would like to express my appreciation to Dr. Deutsch for asking me to discuss this important subject.

The question of low-tension glaucoma has occupied ophthalmology for many years, and as far as I can see, it has not really been decided that it is a definite entity. Dr. Deutsch has quoted Redslob who reported that he found, in some 60 cases examined at autopsy, sclerosis of the capillaries and small arterioles in the optic nerve. This seems to be the primary pathologic change in the condition under discussion. It does not seem, or at least is hard to conceive, that a tension of 16 could produce optic atrophy and depression of the optic nerve as we see it in these cases.

It seems to me more probable that the findings associated with the so-called low-tension glaucoma are a part of arteriosclerosis and senescence of tissue, just as the many other relaxations and degenerations of tissue that take place in other parts of the body with aging. Certainly the more rigid blood vessels of arteriosclerosis should resist pressure better than more elastic blood vessels, the blood pressure being the same. It has been proved a good many times that in the presence of increased blood pressure the blood vessels of the retina and the optic nerve withstand a greater intraocular pressure without deterioration than with normal blood pressure.

It is a good observation of Dr. Deutsch that if blood pressure is suddenly lowered, a profound effect on vision may be produced in some cases.

The work of Dr. Becker has brought to our attention the importance of P_o/C ratio in interpreting the tonographic tracings, particularly in borderline cases wherein there is question of the diagnosis of glaucoma. On the other hand, when the pressure is in the neighborhood of 16-17-18, it seems to me that even though the P_o/C ratio is over 100, the diagnosis must remain conjectural.

I recall that some years ago Dr. E. C. Ellett re-

ported a series of cases from his long experience, in some of them he operated and in others did not. He did trephinings, and the tension was lowered very markedly but the course was no different in those operated upon and those not operated upon. Therefore, lowering the tension did

not arrest the deterioration of the optic nerve.

I must say, however, although I am unconvinced, that low-tension glaucoma is a real entity, and that faced with a deteriorating field and cupping of the disc, I use miotics to reduce the tension just as Dr. Deutsch does.

CLINICOPATHOLOGIC CONFERENCE

Vanderbilt University Hospital* Meningitis and Focal Neurologic Findings

A 39 year old white insurance salesman was admitted to Vanderbilt University Hospital on February 21, 1953 with a chief complaint of headache.

The patient's wife stated that he had not felt up to par for 6 months and that he had shown some mentative change in recent weeks. The patient believed he was in good health until 12 days prior to admission when he noted the onset of occipital and parietal headache which was accompanied by a stiff neck and steadily increased over a 3 day period. Nine days prior to admission he was admitted to another hospital where a lumbar puncture revealed turbid cerebrospinal fluid containing 8,200 white blood cells per cmm., 88 per cent of which were polymorphonuclear leukocytes and 12 per cent monocytes. A smear and culture were reportedly negative. There were no reports on cerebrospinal fluid protein or sugar determinations. A repeat lumbar puncture the following day had revealed 825 cells per cmm. with 92 per cent polys and 8 per cent monocytes. A smear was said to have revealed gram negative cocci, but cultures were negative.

During this hospitalization he received 5 to 7 grams of sulfadiazine and 600,000 units of penicillin daily. Repeat lumbar punctures yielded cerebrospinal fluid with white cell counts of 231 to 5,120 per cmm. The last differential leukocyte count showed 92 per cent polymorphonuclear granulocytes and 8 per cent monocytes. Cerebrospinal fluid protein was 108 mgm. per cent. While in the outside hospital the patient continued to have severe headaches requiring heavy sedation for relief. He remained well oriented but drowsy, and according to his wife his temperature never rose above 100° F. The patient also reported progressive hearing loss in the left ear.

The past history was unremarkable. A chest x-ray taken 2 years previously was reportedly negative.

Physical examination on admission to Vanderbilt University Hospital revealed a blood pressure of 140/80 mm. Hg., a pulse of 70 per minute, respirations 18 per minute, and temperature 98° F. The patient was a well-developed, oriented, lethargic white male complaining of headache. There were no skin or mucus membrane lesions. The pupils were round, regular, equal, and reacted to light and accommodation. The fundi showed poorly defined disc margins but no frank papilledema, hemorrhages, or vessel changes.

*Departments of Medicine and Pathology, Vanderbilt University School of Medicine, Nashville, Tennessee.

Hearing appeared impaired in the left ear, but the ear drums were intact. There was no local or generalized lymph node enlargement. The lungs were clear to percussion and auscultation. The heart appeared normal in size, and a soft apical systolic murmur was audible. The abdomen was non-tender and no organs or masses were palpable. Neurological examination by one observer showed a possible right facial weakness and deviation of the tongue to the left, but these findings were not noted on subsequent examinations. There were obvious signs of meningeal irritation with a rigid neck, and Kernig and Brudzinski signs were positive.

Laboratory studies:

Urine: Sp. Gr. 1.011, pH 5.5, albumin—negative, sugar—negative. Microscopic—1-3 WBC's and 4-8 RBC's

Blood: Hemoglobin 11.3 gms. %, Hematocrit 38%, Corrected sedimentation rate 29 mm. per hr., Fasting blood sugar 81 mg. %, Total serum proteins 6.9 gms. %, with an albumin/globulin ratio of 4/2.9, Non-protein nitrogen 28 mg. %, Cl 93 milliequivalents per liter, Kahn—negative. WBC 16,300 with 71% segs, 1% eos, 3% basos, 14% lymphs, and 11% monos.

Stool: negative x 2 for blood

CSF:

Hosp. Day	Prot.	Sug.	Cells	Polys	Mono	Chlorides
1	246	24	810	Pred*		113.4
2	278	24	2000		Pred*	109.8
3	205	26		33	67	
5	218		302	32	68	
7	238	44	78			
10	284	32	780	65	35	

*Many degenerated forms.

Pressure fluctuated between 200-600 on each tap.

Serology—negative Mastic—1+1+1+00

Chest x-ray: Moderate bilateral apical thickening with minimal changes of fibrosis.

Bacteriology: Blood culture x 1—negative, two 24 hour urines for tubercle bacilli negative on smear and culture. Cerebrospinal fluids on day 2, 3, 5, 7 negative on smear, culture, and guinea pig inoculation for tubercle bacilli. However, on day 2 after 4 hours searching, 2 acid fast organisms were seen. Routine smears and cultures and fungus cultures were negative. No India ink preps are reported.

Course in the Hospital:

The patient started on sulfadiazine, 6 grams daily by mouth, plus penicillin, 600,000 daily; streptomycin, 2 grams daily; and isoniazid, 300 mgm. per day. On days 4, 6, 8, and 10 he received 50 mgm. streptomycin sulfate intrathecally. During the first 7 days of hospitalization the patient remained febrile to 101°, but his temperature declined toward normal during the last 3 days of his life. There appeared to be significant increase in alertness, appetite, and decreased headache over the first 9 days. Neurological examination remained unremarkable. On the night of the tenth hospital day the patient became com-

bative and delirious. The following day he vomited then lapsed into coma. At this time the left pupil was noted to be irregular and reacted minimally to light. The right pupil was dilated and fixed. The patient was completely unresponsive, with flaccid neck and extremities, and no left arm reflexes could be obtained. During the next 4 hours the respiratory rate declined, breathing became periodic, and the patient expired.

Discussion

DR. DAVID E. ROGERS: We are presented today with a problem which appears deceptively simple. A 39 year old man with obvious meningitis which did not respond satisfactorily to antimicrobial therapy died after 10 days in the hospital. The important features of this illness about which we might orient our discussion would seem to be the following:

1. The obvious meningitis.
2. The findings of *turbid* spinal fluid containing large numbers of polymorphonuclear leukocytes on initial lumbar puncture.
3. A definite leukocytosis.
4. The persistently low cerebrospinal sugar and elevated cerebrospinal fluid pressure.
5. The shifting cerebrospinal leukocyte count ranging from 70 to 2,000 cells with a varying predominance of polymorphonuclear leukocytes and monocytes.

Before focusing on the obvious meningitis, let us put the known features in this case together in another way, ignoring the meningeal signs. A middle aged male began to feel unwell 6 months prior to admission. His wife noted some mentative changes. He developed headache and decrease in hearing in the left ear. On examination he showed early optic nerve head changes, left sided hearing loss, possible left tongue weakness, and a terminal left hemiparesis. Viewed in this way the story strongly suggests a space occupying lesion within the brain.

Now let us return to a consideration of the abnormal cerebrospinal fluid findings. In thinking about patients with meningitis, elevated cerebrospinal fluid pressures and proteins do not aid me in differentiating one form from another. Of more differential help are: a) the gross finding of cloudy, purulent, or turbid spinal fluid, b) low cere-

brosplinal fluid sugar values. It takes above 500 leukocytes per cmm. to produce a cloudy spinal fluid. It has been my general dictum that when one observes turbid or cloudy spinal fluid on initial lumbar puncture it should be assumed that bacterial meningitis is present. The low cerebrospinal fluid sugar also suggests the presence of infection of an acute or chronic nature, although certain other possibilities should be entertained. In considering the present case I believe that we must consider two general disease categories:

1. That this patient had a pyogenic meningitis arising under circumstances which prevented the usual response to antimicrobials.
2. That this patient had a chronic meningeal syndrome associated with a low spinal fluid sugar. The following disease processes which will produce this syndrome require consideration:
 - a) tuberculous meningitis
 - b) fungal meningitis caused by *Cryptococcus neoformans* or *Histoplasma capsulatum*
 - c) meningovascular syphilis.
 - d) carcinoma, lymphoma, or brain tumor with secondary neoplastic involvement of the meninges.
 - e) sarcoidosis of the meninges or subarachnoid bleeding.

All of these disease entities are associated with the findings suggesting meningitis. All can produce marked reduction in cerebrospinal fluid sugar values. Let us consider how each of these possibilities fits the present picture.

1. *Pyogenic meningitis*. Clearly this patient's course was not typical of the usual pyogenic meningitis arising in males in this age group. Pneumococci, staphylococci, and meningococci are the common etiologic agents. Although the initial cerebrospinal fluid findings were very suggestive of pyogenic infection, the absence of high fever and the lack of response to antimicrobials seems puzzling. The therapy administered may have been inadequate. However, this relative refractoriness to therapy could also be explained on another basis. This man may have developed a relatively silent brain abscess with late extension to the meninges. Such a focal pyogenic lesion in

the central nervous system might perpetuate his meningeal signs, might not respond to antimicrobial therapy, and could explain the persistently elevated pressure, the varying cellular response, and the focal signs noted prior to death. We will return to this possibility.

2. *Tuberculous meningitis.* The chronic course, the failure to respond promptly to antimicrobials are compatible with such a process. A tuberculoma in the brain stem could explain the focal findings. Against this possibility is the fact that tuberculous meningitis in this age group is usually seen in association with obvious tuberculosis elsewhere. Furthermore, the negative cultures and guinea pig inoculations, and the persistence of large numbers of polymorphonuclear leukocytes in the spinal fluid make me believe this disease is unlikely.

3. *Fungal meningitis.* *Cryptococcus neoformans* can produce such a chronic meningeal syndrome, and it is sometimes difficult to find these microorganisms in the cerebrospinal fluid where they are often confused with red cells or lymphocytes. Nevertheless, it has been my experience that cryptococcal meningitis rarely arises in patients who are otherwise well. At least 50 to 60 per cent of cryptococcal disease is seen in patients with Hodgkins disease, other lymphomas, sarcoidosis, or disease of the reticuloendothelial system. Furthermore, cryptococci are readily grown on culture. The negative fungal cultures would rule against this. Last year at this conference we discussed a patient with the chronic meningeal syndrome and low spinal fluid sugars who was found to have histoplasmosis of the central nervous system. The absence of diffuse findings in the chest and abdomen would make the possibility of histoplasmosis seem unlikely, although no skin tests were performed on this man.

3. *Acute meningovascular syphilis.* I mention this possibility to make you aware of the fact that this syndrome can produce low cerebrospinal fluid sugars. This possibility is adequately eliminated by the negative blood and cerebrospinal fluid serology.

4. *Carcinomatous or lymphomatous involvement of the meninges.* The possible presence of a space occupying lesion, the suggestive long history of ill health, the fo-

cal signs, and the low spinal fluid sugar all suggest the possibility of a malignancy with meningeal involvement. There are, however, certain features in the history and the findings which I believe make this unlikely. First, the abrupt onset of meningeal signs would be atypical in slowly progressing tumorous involvement. Secondly, the finding of large numbers of polymorphonuclear leukocytes in the cerebrospinal fluid has not to my knowledge been reported in this situation. Thirdly, we have no evidence of any primary lymphoma or tumor outside the central nervous system.

5. *Other syndromes associated with low cerebrospinal fluid sugar.* It might be pointed out that patients with sarcoid with meningeal involvement and some patients with subarachnoid bleeding show low cerebrospinal fluid sugars. There is nothing to suggest either of these possibilities, and they need not be further considered.

In making a final diagnosis, I have decided to remain with my original dictum—that cloudy cerebrospinal fluid with high polymorphonuclear leukocytic response means the presence of bacterial infection of the meninges. In making such a diagnosis, I must explain the lack of response to antimicrobials, the shifting findings in the cerebrospinal fluid, the persistently high cerebrospinal fluid pressure, and the focal finding appearing on the last day of life. I believe all these signs and symptoms can be explained by the presence of a single or perhaps multiple brain abscesses.

I am inclined to believe that the early loss of hearing in the left ear is an important clue. Prior to the days of antimicrobials, mastoiditis with subsequent involvement of the temporal lobe represented the most common cause of brain abscess formation. A large abscess in the temporal lobe could explain the pupillary findings and possibly the involvement of the left cranial twelfth nerve. However, we are then faced with some incompatible neurologic signs. This patient developed a left hemiparesis and possibly a right cranial seventh nerve weakness. Two possibilities come to mind. a) that this patient had multiple brain abscesses, b) that he did have a left temporal lobe lesion which pressed the cerebral peduncle against the skull on the opposite

side, resulting in an ipsilateral hemiparesis.

My final diagnoses would be:

1. Pyogenic brain abscess secondary to acute mastoiditis, probably multiple, possibly a single large abscess in the left temporal area.
2. Secondary rupture into the subarachnoid space causing a pyogenic meningitis. I believe staphylococci, pneumococci, or gram negative bacilli represent the most likely etiologic agents.

Pathology Discussion—Dr. John L. Shapiro

The body (V-53-50) other than the central nervous system was actually free of remarkable findings. There was an apical scar in the lung but no evidence of activity in this particular lesion. The heart was normal in size and the valves showed no vegetations, a fact of some importance in light of our findings in the central nervous system. The lungs were free of suppurative disease or any evidence of recent involvement by such a process. I have just re-examined all the sections in the hope that I might uncover a focus of suppuration somewhere in the different organs that might serve as the primary source of infection for the central nervous system. This search has been futile.

Examination of the central nervous system revealed that the brain was under considerable pressure. When the dura was incised it bulged and there was flattening of the gyri as is evident on the photographs that I will show. There was thought to be some exudate at the base of the brain and when the brain was removed an accumulation of exudate was seen over the base of the temporal lobe on the left. Here in this

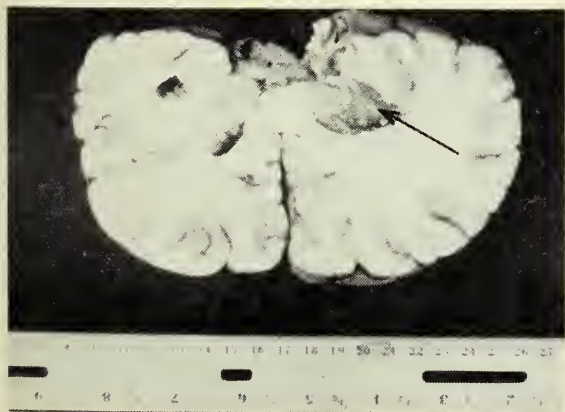


FIG. 1.

picture (Fig. 1) you can see an abscess cavity which occupies the temporal lobe of the left side of the brain. It involved and converted the temporal horn of the left lateral ventricle into a loculated abscess. Inferiorly you can see the proximity and, I suspect, actual continuity of the suppurative process with the meninges though this process was localized somewhat by adhesions over the cortex in this area. There is no doubt that this served to seed the meninges with organisms and resulted in the pleocytosis and other spinal fluid findings which were present in this case.

In the other section of brain (Fig. 2) you

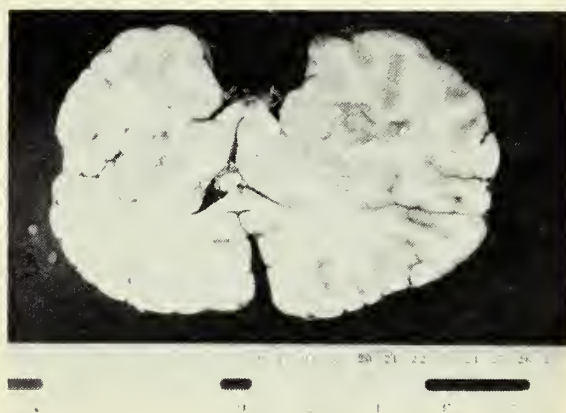


FIG. 2.

can see the distortion of the brain produced by edema in association with this abscess. The tremendous swelling of the left side is evident with distortion of the intra-cerebral structures. I am not sure that there was a herniation of the uncus or of the medulla inasmuch as no such note is made in the chart. However I would suspect the presence of such from the appearance of brain in these pictures. The meningitis showed mixed type of cells. There were both round cells and polymorphonuclear leukocytes in abundance and the meningitis was not extremely prominent except in the immediate area of the temporal lobe on the left.

I am at a loss to explain how this abscess came to be. As I indicated, no suppurative focus was demonstrated elsewhere in the body. I feel relatively certain, though not absolutely sure, that the dural sinuses were free of thrombosis. This statement is not specifically made in the protocol and I cannot remember whether this was done or not though I feel certain that the dural sinuses

were opened. No mention is made either of the mastoid cells on the left and whether examination of these structures was carried out, though certainly it should have been done. With the lack of any penetrating trauma to the head, the failure of demonstration of suppurative foci in the lung or elsewhere in the body and the lack of bacterial endocarditis we have eliminated many of the foci from which these abscesses will ordinarily originate.

The reaction in the abscess is suppurative though there is not a great deal of pus present—much of it has been broken down. We were chagrined when we could grow no organism by routine culture, by fungus culture from the brain and the meninges. We made attempts to isolate acid fast organisms by guinea pig inoculation and also by direct smears. The material was inoculated into mice and also on to the chorio-allantoic membrane of the chick embryo as well as into the yolk sac without any evidence of growth of an organism. Therefore we must conclude that the abscess was bacteriologically sterile. I feel relatively certain on the

basis of my examination that this abscess resulted from a pyogenic infection.

I would judge the abscess to be some two weeks or more in duration. I have difficulty estimating the age of such a lesion especially when it gives evidence of migrating through brain substance and involving the ventricle.

The mechanism of death in this patient is open to speculation, I believe. Assuming that the abscess was sterile and that the final event resulted from progressive enlargement I believe a case can be made for progressive increase in size due to constantly increasing osmotic pressure. I suspect that the breaking down exudate would serve to attract more water and that this lesion might in some ways act like a subdural hematoma, taking up more fluid in the course of its natural change.

Final Diagnoses

1. Pyogenic abscess of left temporal lobe of brain involving temporal horn of left ventricle.
2. Mild meningitis secondary to #1
3. Healed apical tuberculosis

President's Page



RALPH O. RYCHENER,
M.D.

The problem of attendance at the Tennessee State Medical Association's annual meeting is one of concern to all of us. Each year, new methods are tried in an effort to produce a meeting that will appeal to more physicians. It has been suggested that there be more entertainment and certainly in 1961, this will be tried, especially on the occasion of the President's Banquet. Having high caliber professional speakers and variations in the program is another method that is being used. For the first time in a number of years, the President of the American Medical Association will address the membership during the annual meeting. All of these are worthwhile; however, attendance at state meetings is not as good it should be.

As one looks about for reasons for this, it soon is apparent that there has been a marked splintering of the medical profession. The specialty groups have interests which are divergent to the point that they require special types of meetings. There are *too many* para-medical groups that require the doctor's interest and these various interests dominate more and more of the physician's time.

We believe that the policy followed in our Association is helpful wherein practically all of the specialty societies have a meeting during the time of the annual meeting. By this method, more and more doctors are brought to the meetings of the State Association. In so doing, the effectiveness and strength of the organization has been enhanced rather markedly.

We are confronted by many problems which require the attention of all. Organized medicine needs the aid of physicians who are in specialties. After all, one's first obligation is to medicine in general. Certainly any specialist can readily see, I believe, that his own future is definitely linked with medicine generally. Our county medical societies, our state medical association and the American Medical Association are the staunch bastions of organized medicine. They represent the freedom of practice in which we believe. If any ills befall medicine generally, the specialists certainly will be caught in the process. The same applies to the general practitioner of medicine. His future likewise is concerned with medicine in general.

TSMA is the only organization in the State in which all doctors of medicine, regardless of the type of work they are doing, can belong. Our State Medical Association will be the vanguard to provide for all practitioners the best climate that can be arranged for them; consequently, the help of all is needed. It is the sincere hope of the officers of the Association that better attendance at annual meetings can be effected. Much time, effort and thought has gone into the planning of the 1961 meeting. I hope you will plan to be in Chattanooga on April 9 through 12.

Ralph O. Rychener, M.D.

President

THE JOURNAL

OF THE
TENNESSEE STATE MEDICAL ASSOCIATION

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Address papers, discussions and scientific matter to R. H.
Kampmeier, M.D., Editor and Secretary, 8210 Vanderbilt
University Hospital, Nashville 12, Tennessee
Address organizational matters to Jack E. Ballentine,
Executive Director, 112 Louise Avenue, Nashville 5, Tenn.

R. H. KAMPMEIER, M.D., Editor and Secretary
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MARCH, 1961

EDITORIAL

THE ROCKING CHAIR

For those who may not have seen the editorial review in a recent issue of "Life" of an article on the rocking chair from "The Lancet" or who do not partake of the delightful reading often found in this British medical weekly, we felt it most worthwhile to bring this subject to your attention.

Although we speak of the hustle and bustle of the twentieth century and deplore the constant stresses and strains of this modern life, we now have more non-working time available than at any time since southern plantations with countless slaves were the way of life of the landed gentry. The forty-hour week for working men and women has increased leisure time and the work-saving appliances of the modern home, in addition to the prepared and pre-cooked meals from today's super markets, have reduced the time spent by housewives in home and kitchen with a resultant increase in free time.

One of the most delightful means of relaxation remembered from our childhood was the rocking chair and, despite the increased leisure time available, we believed, as the result of our observations in patients' homes, that the rocker was on the way out. Contrary to this conviction "Life" states that due to the television viewing boom, sales of rocking chairs have increased now to 500,000 per year. We suspect these chairs are being shipped to more remote areas, but if television viewing does increase the use of rockers, we promise to become less intense in our dislike of this present lazy fashion in entertainment.

Dr. R. C. Swan who describes himself as a general practitioner from Ontario sees many more rocking chairs than we, and has been struck by the excellent mental and physical state of those who survey his entrance to their homes from a rocking chair. His analysis of the rocking chair's virtues justifies the conclusion that it is a therapeutic agent useful to all, especially our growing geriatric population.

"It enables all but the most feeble to indulge in limited exercise without regard to time or weather, and in a dignified manner.

The activity imposed on forearm and calf muscles encourages venous return, and thus increases the cardiac output and circulation generally, and helps the absorption of dependent oedema.

The exercise itself promotes respiration and discourages formation of hypostatic pulmonary congestion.

By promoting movement it stimulates muscle tone and encourages supple joints.

Toward night its repetitive and sedative effects encourage sleep. The hypnotic effects of rocking in infancy are well known, but its value in the aged is perhaps less realized.

'Rocking,' psychoanalytically speaking, can be considered a socially acceptable and significant activity, encouraging the individual to take part in home activities and to maintain integration with other members of the family circle."

Although non-working time is so much greater than during previous generations, this pleasurable activity was much better known to our forefathers. Dr. Swan now

(Continued on page 109)

Tennessee State Medical Association

1961 Annual Meeting

CHATTANOOGA, TENNESSEE *April 9-12*

READ HOUSE

PATTEN HOTEL

GUEST SPEAKERS

- E. Vincent Askey, M.D., Los Angeles, California, President, American Medical Association
- Ernest B. Howard, M.D., Chicago, Illinois, Assistant Executive Vice President, American Medical Association
- C. R. Stephen, M.D., Professor of Anesthesiology, Duke University School of Medicine, Durham, North Carolina
- Jas. E. Fitzgerald, M.D., Associate Professor of Obstetrics, Northwestern University Medical School, Chicago, Illinois
- Joseph A. Little, M.D., Associate Professor of Pediatrics, University of Louisville School of Medicine, Louisville, Kentucky
- Alexander B. Langmuir, M.D., Chief of the Epidemiology Branch, Communicable Disease Center, Public Health Service, Atlanta, Georgia
- T. S. Danowski, M.D., Professor of Research Medicine, University of Pittsburgh School of Medicine, Pittsburgh, Pennsylvania
- W. H. Remine, M.D., Head of a Section of Surgery, Mayo Clinic, Rochester, Minnesota, and Assistant Professor of Surgery, Mayo Foundation, Graduate School, University of Minnesota, Minneapolis, Minnesota

Hotel Reservations: —————→

GENERAL SCIENTIFIC MEETINGS
MEETINGS OF SPECIALTY SOCIETIES
(Afternoons)
April 9-10-11-12

TECHNICAL EXHIBITS

CHATTANOOGA CONVENTION AND
TOURIST BUREAU

819 BROADWAY

CHATTANOOGA 2, TENNESSEE

President's Banquet



Monday, April 10 • Ballroom,
The Read House



House of Delegates

Sunday, April 9 • Tuesday, April 11
Read House

Registration Daily



8:00 a.m. to 5:00 p.m. . . . No Registration Fee

TO ADDRESS TSMA AT ANNUAL MEETING

Dr. Ernest B. Howard, assistant executive vice president of the American Medical Association, brings to his position a valuable background in the field of medicine. He has held an executive position with the AMA since 1948.

Born in Boston, Massachusetts, on February 5, 1910, he received his A.B. degree at Harvard College in 1931, and in 1936 was awarded his M.D. degree at the Boston University Medical School, completing his internship in the Boston City Hospital in 1937. The Harvard School of Public Health conferred upon him, in 1941, the Master of Public Health Degree.

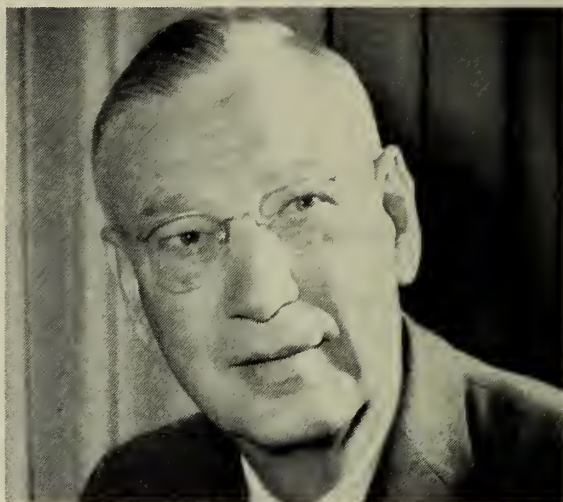
Dr. Howard served as director of the Division of Venereal Disease Control, Massachusetts Department of Public Health from 1940 to 1942. Entering the Army during the latter year, as a medical officer, he became assistant director of the Army's venereal disease program. He served in that capacity until his return to inactive status in 1945.

When the United States Department of State sent a health mission to Peru in 1946-47, Dr. Howard was chosen as its chief. In recognition of his service, he received Peru's highest decoration, the Order of the Sol.

Dr. Howard will address the membership of the Tennessee State Medical Association on Monday morning, April 10. His subject will be "MEDICINE AND PRESIDENT KENNEDY."



ERNEST B. HOWARD, M.D.



E. VINCENT ASKEY, M.D.

Dr. E. Vincent Askey, Los Angeles, California, the 114th President of the American Medical Association, will be a featured guest speaker at the annual meeting on Monday, April 10th.

Dr. Askey's brother, Lieut. H. L. Askey, was severely wounded at St. Mihiel in World War I, and spent his last days in Los Angeles. Had it not been for his love and affection for his brother, Dr. Askey might have settled in Pennsylvania.

It was in Pennsylvania where he had gone to high school, played football with the state high school champions, and then on to Allegheny College, and later to the University of Pennsylvania where he received his M.D. degree in 1921.

He spent his internship and residency at the Hospital of The Protestant Episcopal Church and Kensington Hospital for Women in Philadelphia during the next two years. Certified by the American Board of Surgery, he later became a fellow of the American College of Surgeons.

He is probably the only practicing physician who has ever held major offices in his county, state, and national medical associations. He served as president of both the Los Angeles County and California State Medical Associations. For four years he was vice speaker of the California Medical Association's House of Delegates.

Dr. Askey will address the membership of the Tennessee State Medical Association on Monday morning, April 10th. His subject will be "NOT UPON A FEW, BUT UPON ALL."

Special Section

SCIENTIFIC PROGRAM OF THE 126TH ANNUAL MEETING OF THE TENNESSEE STATE MEDICAL ASSOCIATION

General Information

In this program is detailed information on the 1961 Annual Meeting of the Tennessee State Medical Association in Chattanooga, April 9-12, 1961.

► Registration

The registration desk will be located on the Mezzanine floor of the Read House. All members, visiting speakers, interns, residents, and guests are urged to register. Admission to all sessions and to the exhibits is by a badge secured at the registration desk. *There is no registration fee.* Programs for all activities during the annual meeting are available at the registration desk. Those eligible to register are members of the Tennessee State Medical Association; physicians from other states who are members of their respective State Medical Society; residents, interns, and medical students.

MISS WILLARD BATEY
Chief Registrar

► Registration Hours

Sunday, April 9—10:00 A.M. (Special Registration for Members of the House of Delegates from 10:00 A.M. to 1:00 P.M.) Advance registration for Exhibitors and Early Arrivers will be conducted from 3:00 P.M. to 5:00 P.M.

Monday, April 10—8:00 A.M. to 5:00 P.M.

Tuesday, April 11—8:00 A.M. to 5:00 P.M.

Wednesday, April 12—8:00 A.M. to 12:00 Noon

► Annual Meeting Headquarters

Headquarters are in the Read House where many activities are scheduled. Practically all of the specialty societies will conduct their meetings concurrently with TSMA in the Read House and at the Patten Hotel.

► TSMA Headquarters Office

Rooms 262-263 and 264 located on the Mezzanine floor of the Read House will be the headquarters of TSMA during the meeting. A member of the staff will be available to assist you at all times. Members of the House of Delegates, Officers, and Reference Committee Chairmen can secure secretarial help when needed. Your headquarters staff is available to assist you in your needs.

J. E. Ballentine, Executive Director

Jack Drake, Public Service Director

C. P. Maguire, Administrative Assistant

Miss Willard Batey, Records and Bookkeeper

Mrs. Doris Darrow, Secretary

Mrs. Jean Ragsdale, Secretary

► President's Banquet and Social Hour

The President's Banquet will be preceded by a Social Hour sponsored by the Tennessee State Medical Association, beginning at 6:00 P.M. on

Monday evening, April 10th. The Social Hour will be conducted in the Continental Room at the Reed House and the Banquet will follow at 7:00 P.M. in the Ballroom. Tickets are available at the registration desk.

Message Center—Emergency Telephones Chattanooga—AM 7-7546 and AM 7-7547

Telephone service will be installed for your convenience in the Message Center on the Mezzanine Floor of the Read House. In-coming emergency calls for those attending the meeting will be handled. You will be notified of your call by a "flash screen" in the Auditorium of the General Scientific Meetings and you will be paged when necessary. Notify your secretary or patients to contact you during the annual meeting at the TSMA Emergency Numbers—Chattanooga—

AM 7-7546 and AM 7-7547

► Banquet Tickets

Tickets to the Social Hour and President's Banquet will be available at the registration desk. Tickets to specialty society luncheons and banquets, as well as the Woman's Auxiliary affairs, can be obtained from their respective registration desks. *Purchase your tickets at the time of registration.* The number that can be accommodated is limited.

► Woman's Auxiliary

The Woman's Auxiliary of TSMA will conduct all phases of its Annual Meeting in the Patten Hotel. The registration desk for the Auxiliary will be located in the lobby and all Committee Meetings, Board Meetings and the General Sessions will be conducted at the Patten Hotel.

► House of Delegates

The first meeting of the House will be held on Sunday, April 9th, beginning at 1:00 P.M. in the Ballroom of the Read House. The second session will be conducted on April 11th, beginning at 9:00 A.M. in the Continental Room at the Read House.

► General Scientific Meeting

The General Scientific Meetings of TSMA will be conducted from 9:00 A.M. until 12:00 Noon on the mornings of April 10-11-12 in the Ballroom of the Read House.

► Specialty Societies

Fourteen specialty societies have arranged to conduct their meetings concurrently with the Tennessee State Medical Association. The scientific and business sessions of the specialty societies will be conducted in the afternoons of April 9-10-11-12. See details in the program listed under each of these days.

► Technical Exhibitors

The Technical Exhibitors will be located in the Main Lobby and on the Mezzanine floor of the Read House and may be visited each day of the annual meeting beginning on Monday, April 10 from 9:00 A.M. until 5:00 P.M. and on Wednesday, April 12 from 9:00 A.M. until 12:00 Noon. The exhibits are an important part of the 126th annual meeting and each physician will be well repaid by spending some time inspecting them. The exhibits will display many educational features of the medical supply world.

ANNOUNCEMENTS AND SPECIAL MEETINGS

President's Banquet

Read House

Monday, April 10—7:00 P.M.

(Social Hour—6:00 P.M.)

Sponsored by TSMA and conducted in the
Continental Room of the Read House

Ralph O. Rychener, M.D., President, Presiding.
Guest Speaker—Mr. Edmund H. Harding, Wash-
ington, N.C.

Introduction of President-Elect—W. O. Vaughan,
M.D.

Special Awards:

Presenting Tennessee's outstanding physician of
the year, by Joseph W. Johnson, Jr., M.D.,
Speaker of House of Delegates.

Presenting Health Project Contest Winner by
W. O. Vaughan, M.D., Chairman, Board of
Trustees.

Presenting award to Miss Brenda Lisle, Chatta-
nooga, Winner of the National Science Fair
Award.



Woman's Auxiliary to the Tennessee State Medical Association April 9-10-11-12, 1961

Patten Hotel

Hospitality Room—Parlors D and E
Registration

Sunday, April 9 —2:00 P.M.-4:00 P.M.

Monday, April 10 —8:00 A.M.-2:30 P.M.

Tuesday, April 11—8:00 A.M.-12:00 Noon

Sunday, April 9, 1961

2:00 P.M.-4:00 P.M. Special Committee Meetings

Monday, April 10

8:00 A.M. Registration

8:30 A.M. Pre-Convention Board Meeting

—Parlors F and G

10:00 A.M. Convention Session

6:00 P.M. TSMA Social Hour—Read House

7:00 P.M. President's Banquet—Ballroom

—Read House

Tuesday, April 11

9:30 A.M. General Session

—Parlors F-G and H

12:30 P.M. Luncheon, Tennessee Room

Patten Hotel

Wednesday, April 12

9:30 A.M. Post Convention Board Meeting

—Parlors D and E

Arts and Crafts Exhibit

The Arts and Crafts Exhibit will be in Parlors
D and E of the Patten Hotel. It is sponsored by
the Woman's Auxiliary to TSMA. Doctors and
their wives are urged to participate in the exhibit.

Monday, April 10

9:30 A.M.-12:00 Noon Arts and Crafts Exhibit
—Parlors D and E, Patten Hotel

Tuesday, April 11

9:30 A.M.-4:00 P.M. Arts and Crafts Exhibit

—Parlors D and E

4:00 P.M. Reclaim entries from

Arts and Crafts Exhibit

Board of Trustees Meeting

The TSMA Board of Trustees will meet in
Parlor B of the Read House at 9:00 A.M. on
Wednesday, April 12.

Scientific Exhibits

Any scientific exhibits presented will be dis-
played on the Mezzanine floor of the Read House.

Technical Exhibits

The exhibits are located on the Main Lobby and
Mezzanine floor of the Read House. They are
open daily at 9:00 A.M. These exhibits display
many educational features of the medical supply
world of interest to doctors.

Public Health Council

The Public Health Council will meet in Parlor
B of the Read House at 10:00 A.M. on Monday,
April 10.

Tennessee Medical Foundation

A Dutch Breakfast will be conducted at
8:00 A.M. on Tuesday, April 11, in Parlor C of the
Read House. A membership and business meeting
will follow.

Tennessee Society of Plastic Surgeons

The Tennessee Society of Plastic Surgeons will
hold their annual meeting at the Lakeshore
Lodge at 2:00 P.M. on Sunday, April 9, 1961. A
business meeting will be conducted. There will
be an evening social gathering on the same date
at the Lakeshore Lodge for the members, their
wives, and guests.

Tennessee State Obstetrical and Gynecological Society

All meetings of the Society will be conducted
at the Pan-O-Ram Club, located on Scenic High-
way.

The Luncheon and Business Meeting will begin
at 12:30 P.M., and the Scientific program will be-
gin at 2:15 P.M.

Technical Exhibits

Technical exhibits for the 1961 Annual Meeting
will be housed on the mezzanine and main lobby
floors of the Read House. The newest develop-
ments in pharmaceuticals, equipment and services
will be on display, with full information available
through trained and experienced representatives.

Exhibits will be open daily from 9:00 A.M. to
5:00 P.M. All physicians will find their time well
spent in visiting the exhibits and keeping abreast
of what is new and useful. **Your Attendance Is
Urged**, for your own benefit as well as for an ex-
pression of cooperation with our exhibitors.

ABBOTT LABORATORIES
North Chicago, Illinois

Mezzanine
Booth 32

BETAN COMPANY, INC.
Chattanooga, Tennessee

Mezzanine
Booth 16

BRAYTEN PHARMACEUTICAL COMPANY Chattanooga, Tennessee	Mezzanine Booth 39	PFIZER LABORATORIES Brooklyn, New York	Mezzanine Booth 29
BYRNE & COMPANY Chattanooga, Tennessee	Main Lobby Booth 18	W.M. P. POYTHRESS & COMPANY, INC. Richmond, Virginia	Mezzanine Booth 40
CARNATION COMPANY Los Angeles, California	Mezzanine Booth 20	A. H. ROBINS COMPANY, INC. Richmond, Virginia	Mezzanine Booth 31
CHATTANOOGA SURGICAL COMPANY Chattanooga, Tennessee	Mezzanine Booth 26	ROCHE LABORATORIES Nutley, New Jersey	Main Lobby Booth 1
CIBA PHARMACEUTICAL PRODUCTS, INC. Summit, New Jersey	Mezzanine Booth 23	SANDOZ PHARMACEUTICALS Hanover, New Jersey	Mezzanine Booth 54
THE COCA-COLA COMPANY Atlanta, Georgia	Mezzanine Booth 35	SCHERING CORPORATION Bloomfield, New Jersey	Mezzanine Booth 30
DAIRY COUNCILS OF TENNESSEE Bristol, Chattanooga, Knoxville, Memphis, Nashville, Tennessee	Mezzanine Booth 45	JULIUS SCHMID, INCORPORATED New York, New York	Mezzanine Booth 43
THE DICK X-RAY COMPANY Knoxville, Tennessee	Mezzanine Booth 14	G. D. SEARLE & COMPANY Chicago, Illinois	Mezzanine Booth 53
DOHO CHEMICAL CORPORATION New York, New York	Mezzanine Booth 46	SMITH KLINE & FRENCH LABORATORIES Philadelphia, Pennsylvania	Mezzanine Booth 15
DOME CHEMICALS, INCORPORATED New York, New York	Mezzanine Booth 50	SMITH, REED, THOMPSON & ELLIS CO. Nashville, Tennessee	Mezzanine Booth 37
EATON LABORATORIES, INC. Norwich, New York	Mezzanine Booth 36	SNELLS ARTIFICIAL LIMB COMPANY Nashville, Tennessee	Mezzanine Booth 51
THOMAS A. EDISON INDUSTRIES Nashville, Tennessee	Main Lobby Booth 5	E. R. SQUIBB & SONS New York, New York	Main Lobby Booth 3
ELI LILLY AND COMPANY Indianapolis, Indiana	Mezzanine Booth 48	THE STUART COMPANY Pasadena, California	Mezzanine Booth 27
FILLAUER SURGICAL SUPPLIES, INC. Chattanooga, Tennessee	Mezzanine Booth 19	TENNESSEE GUILD OPTICIANS	Mezzanine Booth 52
GEIGY PHARMACEUTICALS (Div. of Geigy Chemical Corp.) Yonkers, New York	Mezzanine Booth 25	T SMA PROFESSIONAL LIABILITY INS. (Malpractice)	Mezzanine Booth 55
JOHN HANCOCK MUTUAL LIFE INS. CO Boston, Massachusetts	Mezzanine Booth 22	THE UPJOHN COMPANY Kalamazoo, Michigan	Mezzanine Booth 28
CHARLES C. HASKELL & COMPANY Richmond, Virginia	Mezzanine Booth 17	U. S. VITAMIN & PHARMACEUTICAL CORP. New York, New York	Mezzanine Booth 41
THE LANIER COMPANY Atlanta, Georgia	Main Lobby Booth 7	VAN PELT & BROWN, INC. Richmond, Virginia	Mezzanine Booth 21
LEDERLE LABORATORIES (Division American Cyanamid Company) Pearl River, New York	Mezzanine Booth 33	WALLACE LABORATORIES Cranbury, New Jersey	Mezzanine Booth 24
J. A. MAJORS COMPANY Dallas, Texas	Mezzanine Booth 13	<p style="text-align: center;">VISIT THE EXHIBITORS</p> <p>The general scientific meetings will be recessed in mid-mornings for thirty minutes each day to give doctors an opportunity to visit the exhibitors.</p> <p style="text-align: right;">C. P. MAGUIRE Director of Exhibits</p> <p style="text-align: center;">☆</p> <p style="text-align: center;">PROGRAM</p> <p style="text-align: center;">Sunday, April 9, 1961</p> <p style="text-align: center;">1:00 P.M. (E.S.T.)</p> <p style="text-align: center;">House of Delegates, Ballroom</p> <p style="text-align: center;">Read House—Chattanooga</p>	
MASSEY SURGICAL SUPPLY COMPANY, INC. Nashville, Tennessee	Mezzanine Booth 49		
MEAD JOHNSON & COMPANY Evansville, Indiana	Main Lobby Booth 6		
MEDCO PRODUCTS COMPANY, INC. Tulsa, Oklahoma	Mezzanine Booth 38		
MERCK SHARP & DOHME (Division of Merck & Co., Inc.) West Point, Pennsylvania	Mezzanine Booth 34		
MUTUAL BENEFIT LIFE INSURANCE CO. (Dunn-Lemly-Sizer) Nashville, Tennessee	Mezzanine Booth 47		
PARKE, DAVIS & COMPANY Detroit, Michigan	Mezzanine Booth 18		

SPECIALTY SOCIETIES



TENNESSEE STATE SOCIETY OF ANESTHESIOLOGISTS

Sunday, April 9, 1961

Read House

Parlor E

10:00 A.M.

Business Meeting

12:00 Noon

Luncheon

1:00 P.M.

SCIENTIFIC PROGRAM

Parlor E

"THE GERIATRIC PATIENT — A SPECIAL PROBLEM"

By: C. R. STEPHEN, M.D., Professor of Anesthesiology, Duke University School of Medicine, Durham, North Carolina



WOMAN'S AUXILIARY TO THE TENNESSEE STATE MEDICAL ASSOCIATION

APRIL 9-12, 1961

CONVENTION HEADQUARTERS

PATTEN HOTEL

* * * * *

33rd Annual Convention

* * * * *

Sunday, April 9

2:00-4:00 P.M. Registration

Main Lobby, Patten Hotel

Program

2:00-4:00 P.M. Entries accepted for Arts and Crafts in Parlors D and E.

2:00-4:00 P.M. Special committee meetings—Awards, Revisions, Finance, will be conducted in Room 914, Patten Hotel.

6:30-8:30 P.M. Executive Committee Meeting—Room 914.

Hostess Auxiliary

The Woman's Auxiliary of the Chattanooga-Hamilton County Medical Society



TENNESSEE SOCIETY OF PLASTIC SURGEONS

Sunday, April 9, 1961

Lakeshore Lodge—Chattanooga

2:00 P.M.

Business Meeting

The Evening Social hour will be conducted at Lakeshore Lodge for members, their wives and guests.

Monday, April 10, 1961

SCIENTIFIC SESSIONS

General Scientific Program

Ballroom

Read House

C. B. ROBERTS, M.D., Sparta
Vice President, TSMA, presiding

9:00 A.M.

An Alternate Method of Repair of Bile Duct Strictures

(Film) a new modification of a method of repair of bile duct strictures is shown in operations on three patients. Other methods of repair are discussed and advantages and disadvantages compared. Two patients are shown several years after hepatocholelangojejunostomy.

Sponsored by JAMES A. KIRTLEY, JR., M.D., Nashville

9:30 A.M.

Chronic Drug Therapy In Anesthesia

By: C. R. STEPHEN, M.D.
Professor of Anesthesiology,
Duke University School of Medicine,
Durham, North Carolina

10:00 A.M.

Visit Exhibits

10:30 A.M.

Toxemia of Pregnancy

By: JAMES E. FITZGERALD, M.D.
Associate Professor of Obstetrics,
Northwestern University Medical School,
Chicago, Illinois

11:00 A.M.

Not Upon A Few, But Upon All

By: E. VINCENT ASKEY, M.D., Los Angeles, Calif.
President, American Medical Association

11:30 A.M.

Medicine and President Kennedy

By: ERNEST B. HOWARD, M.D.
Assistant Executive Vice President
American Medical Association
Chicago, Illinois



SPECIALTY SOCIETIES

TENNESSEE ACADEMY OF GENERAL PRACTICE

MONDAY, APRIL 10, 1961

8:00 A.M.

Registration

Main Lobby

SCIENTIFIC PROGRAM

(Category I Credit Approved)

Total 7 hrs., TAGP members

Read House

Ballroom

12:00 Noon

Congress of Delegates

1:00 P.M.

Presiding: JOHN L. ARMSTRONG, M.D.
President, TAGP

12:00-1:00 P.M. Annual Spring Meeting of TAGP
Congress of Delegates

1:00-1:30 P.M. Convalescent Care of Rheumatic Fever and Nephritis in Children
JOSEPH LITTLE, M.D., Louisville, Ky.

1:30-2:00 P.M. Fat and Your Heart

MERRILL F. NELSON, M.D., Chattanooga

2:00-2:30 P.M. Rheumatoid Diseases

BEN J. ALPER, M.D., Nashville

2:30-3:00 P.M. Some Aspects of the Treatment of Coronary Artery Disease

PHILIP H. LIVINGSTON, M.D., Chattanooga



TENNESSEE RADIOLOGICAL SOCIETY

MONDAY, APRIL 10, 1961

Parlor H, Patten Hotel

12:15 P.M.

Luncheon—Parlor H

PROGRAM

1:15 P.M.

Business Meeting**Scientific Presentation:****X-ray Examination of the Colon**

By: ROBERT C. PENDERGRASS, M.D.,
Vice President,
American College of Radiology,
Americus, Ga.

Following the address of Dr. Pendergrass, there will be a film reading session. This will complete the program. The session will be open to the public.

Film Reading

Participants will expertly diagnose films of proven cases to be submitted by members or guests. Cases to be submitted for diagnosis should be diagnostic problems and supported by films of good quality.



TENNESSEE STATE OBSTETRICAL AND GYNCOLOGICAL SOCIETY

MONDAY, APRIL 10, 1961

**Pan-O-Ram Club Scenic Highway
GENERAL SCIENTIFIC MEETING**

10:30 A.M.

(Read House Ballroom)

Toxemia of Pregnancy

By: JAMES E. FITZGERALD, M.A., Associate Professor of Obstetrics, Northwestern University Medical School, Chicago, Ill.

12:30 P.M.

**Luncheon and Business Meeting
Pan-O-Ram Club Scenic Highway**

2:15 P.M.

Scientific Program

**Pan-O-Ram Club Scenic Highway
Maternal and Perinatal Mortality Statistics, Tennessee for Past Five Years**

R. H. HUTCHESON, M.D. and W. B. FARRIS, M.D.,
Department of Public Health, Nashville, Tenn.

2:40 P.M.

Guest Speaker: JAMES E. FITZGERALD, M.D., Chairman Department of Gynecology, Cook County Hospital, Chicago; Professor Obstetrics Northwestern University, Chicago, Ill.

Subject: Twenty-five Years Experience on the Maternal Mortality Committee of Chicago.

3:10 P.M.

INTERMISSION

3:20 P.M.

Effect of Local Hydrocortisone on Healing After Pelvic Surgery.

SAMUEL S. BINDER, M.D., Chattanooga
Discussants: HOMER PACE, M.D., Nashville,
ROBERT RUCH, M.D., Memphis

3:45 P.M.

Cancer of Cervix.

J. D. PIGOTT, M.D.; R. R. BRAUND, M.D. and ANN BASS AVERY, M.D., Memphis
Discussants: ROBERT CHALFANT, M.D., Nashville
ALBERT DIDDLE, M.D., Knoxville

4:10 P.M.

The Evaluation of the Punch Biopsy in the Diagnosis of Carcinoma in Situ of the Cervix.

ROBERT TOSH, M.D. and JOHN THOMISON, M.D.,
Vanderbilt University Hospital, Nashville.
Discussants: B. K. HIBBETT, III, M.D., Nashville
STEWART AUERBACH, M.D., Chattanooga

4:35 P.M.

Case Report: Term Pregnancy, Complicated by Idiopathic Thrombocytopenic Purpura.

EUGENE LINTON, M.D., Knoxville

6:30 P.M.

Cocktail Party (Courtesy Mead Johnson Pharmaceutical Company).

7:30 P.M.

Banquet (Courtesy Brayten Pharmaceutical Company).

TENNESSEE ACADEMY OF OPHTHALMOLOGY AND OTOLARYNGOLOGY

MONDAY, APRIL 10, 1961

Parlor C

Read House

12:15 P.M.

LUNCHEON with question and answer round table discussion.

SCIENTIFIC PROGRAM

2:00 P.M.

Meeting called to order

D. ISBELL, M.D., President

2:10 P.M.

Ophthalmodynamometry—As a Diagnostic Aid

RICHARD DESAUSSURE, M.D., Memphis

2:30 P.M.

Radical Neck Dissection in Laryngeal Cancer Surgery

JOHN CAMPBELL, M.D., Memphis

2:50 P.M.

Vitreous Opacities—Two Case Reports

C. L. LASSITER, M.D., Chattanooga

3:10 P.M.

Survey of Surgical Treatment of Congenital Cataract

MELVIN DEWEESE, M.D., Memphis

3:35 P.M.

Tympanoplasty with Vein Graft

DAVID AUSTIN, M.D., Memphis

4:05 P.M.

Functions of the National Medical Foundation for Eye Care, a slide presentation.

RALPH O. RYCHENER, M.D., President, Tennessee State Medical Association and President, National Medical Foundation for Eye Care.

4:30 P.M.

Business Meeting



TENNESSEE THORACIC SOCIETY

MONDAY, APRIL 10, 1961

Continental Room—Read House

12:15 to 1:30 P.M.

Luncheon and Business Meeting

Continental Room

SCIENTIFIC PROGRAM

1:30 P.M.

Techniques In Management of Chronic Respiratory Diseases

By: BEN V. BRANSCOMB, M.D.,
Assistant Professor of Medicine,
University of Alabama School of Medicine,
Birmingham, Alabama

Acute Aortic Dissection

By: W. K. SWANN, M.D., Knoxville

Deep Hypothermia with Complete Arrest of Circulation for Cardiac Surgery

By: W. K. ROGERS, M.D., Knoxville
E. CONVERSE PEIRCE II, M.D., Knoxville
C. HARWELL DABBS, M.D., Knoxville
FREEMAN L. RAWSON, M.D., Knoxville

Use of Cromic Catgut for Bronchial Closure Following Resectional Surgery

By: ROBERT W. NEWMAN, M.D., Knoxville
WM. ACUFF, M.D., Knoxville

Surgery of Histoplasmosis

By: DUANE CARR, M.D., Memphis
JOSE SAPORTA, M.D., Memphis
WHEELAN SUTLIFF, M.D., Memphis

Pectus Excavatum

By: L. SPIRES WHITAKER, M.D., Chattanooga

Problems in the Treatment of Carotid Artery Insufficiency

By: JESSE E. ADAMS, M.D., Chattanooga
E. WHITE PATTON, M.D., Chattanooga



TENNESSEE SOCIETY OF PATHOLOGISTS

MONDAY, APRIL 10, 1961

12:15 P.M.

Dutch Treat Luncheon

Read House

Parlor E

SCIENTIFIC PROGRAM

1:30 P.M.

JOHN B. THOMISON, M.D., President, Tennessee Society of Pathologists, *Presiding*

1:30 P.M.

Comments on One Year's Work in a Toxicology Laboratory

J. T. FRANCISCO, M.D.

Differential Diagnosis of Giant Cell Tumors of Bone

W. S. GILMER, JR., M.D.

Other Presentations

3:00 P.M.

Business Meeting

4:30 P.M.

Social Hour



WOMAN'S AUXILIARY TO THE TENNESSEE STATE MEDICAL ASSOCIATION

MONDAY, APRIL 10, 1961

Patten Hotel

Registration—Main Lobby—8:00 A.M.

Entries accepted for Arts and Craft
Parlors D and E

9:30 A.M.—12:00 Noon

PROGRAM

8:30-9:45 A.M.

Pre-Convention Board Meetings

—Parlors F and G (Buffet Breakfast)

10:00-12:00 Noon

General Convention Session—Tennessee Room

9:30 A.M.—4:30 P.M.

Hospitality Room Open—Parlors D and E

12:30 P.M.

Luncheon Honoring Past Presidents and President of the Woman's Auxiliary to the Southern Medical Association—Parlor A

3:00 P.M.

Tea—Hunter Art Gallery

7:00 P.M.

President's Banquet—Tennessee State Medical Association—Read House



Tuesday, April 11, 1961

9:00 A.M.

House of Delegates, Continental Room Read House—Chattanooga

General Practice Day

General Scientific Program

(Jointly presented in cooperation with the Tennessee Academy of General Practice)
Category I credit approved

Ballroom

Read House

J. KELLEY AVERY, M.D., Union City, Vice President, TSMA, presiding

9:00 A.M.

The Prevention of Invasive Cancer of The Cervix

By: W. POWELL HUTCHERSON, M.D., Chattanooga
Discussed by: JAMES W. ELLIS, M.D., Nashville

9:30 A.M.

Natural History of Streptococcal Infections

By: JOSEPH A. LITTLE, M.D.,
Associate Professor of Pediatrics
University of Louisville School of Medicine
Louisville, Ky.

10:00 A.M.

Visit Exhibits

10:30 A.M.

Clinical and Epidemiological Aspects of Enterovirus Infections

By: ALEXANDER D. LANGMUIR, M.D.,
Chief of Epidemiology Branch,
Communicable Disease Center,
Public Health Service,
Atlanta, Ga.

11:00 A.M.

Symposium—**Present Day Concepts in Immunization**

Panel: CECIL B. TUCKER, M.D., Nashville, Moderator;
LUTHER A. BEAZLEY, M.D., Donelson,
JOHN S. DERRYBERRY, M.D., Shelbyville,
ROGER T. SHERMAN, M.D., Memphis, ALEX-
ANDER D. LANGMUIR, M.D., Atlanta, Re-
source physician

**SPECIALTY SOCIETIES****TENNESSEE MEDICAL FOUNDATION****TUESDAY, APRIL 11, 1961****Parlor C****Read House**

8:00 A.M.

Dutch Breakfast

8:45 A.M.

Membership Business Meeting—Parlor C
Reports and Elections

**TENNESSEE CHAPTER AMERICAN COLLEGE OF SURGEONS****TUESDAY, APRIL 11, 1961****Ballroom—Read House****WELCOME**

The Tennessee Chapter, A.C.S. extends a cordial invitation to all physicians attending the TSMA meeting, to be the guests at the scientific sessions of the A.C.S. on Tuesday, April 11. Residents, interns and students are especially welcome.

PROGRAM

JOHN C. BURCH, M.D., Nashville, President,
Presiding

1:30 P.M.

Intestinal Obstruction Due to Diverticular Concretion

GENE KISTLER, M.D., Chattanooga

2:00 P.M.

Guest Paper—Surgical Lesions of the Pancreas

W. H. REMINE, M.D., Mayo Clinic, Rochester,
Minn.

2:30 P.M.

Plastic Surgery of the Hand

ANTHONY P. JEROME, M.D., Memphis

3:00 P.M.

Blunt Trauma to the Aorta and Major Arteries

ROBERT P. MCBURNEY, M.D., Memphis

3:30 P.M.

Bladder Neck Obstruction in the Younger Male

JOHN DOUGHERTY, M.D., Knoxville

3:50 P.M.

Postoperative Management of Bilroth I Gastrectomy and Vagotomy

GILBERT A. RANNICK, M.D., Johnson City

4:15 P.M.

Business Meeting of Tennessee Chapter of American College of Surgeons**EVENING PROGRAM****Ballroom****Read House**

6:30 P.M.

Social Hour

7:30 P.M.

Banquet (For members and wives)

Presiding: JOHN C. BURCH, M.D.

6:30 P.M.

Cocktail Hour—Ballroom, Read House

7:30 P.M.

Banquet—Guest Speaker—MR. JAMES WEBSTER,
Yucatan Explorers Society

**TENNESSEE ACADEMY OF OPHTHALMOLOGY AND OTOLARYNGOLOGY****TUESDAY, APRIL 11, 1961****Parlors C****Read House**

12:15 P.M.

Luncheon with question and answer round table
discussion.

SCIENTIFIC PROGRAM

2:00 P.M.

Meeting called to order

D. ISBELL, M.D., President

2:05 P.M.

Use of Urea in Ophthalmology

JOSEPH SCOTT, M.D., Memphis

2:25 P.M.

Management of Orbital Floor Fractures

REESE PATTERSON, M.D., Knoxville

2:45 P.M.

Ocular Hypersensitivity Reactions During Systemic Anti-Tuberculous Treatment

ALICE DEUTSCH, M.D., Memphis

3:05 P.M.

Ossicular Injuries

WILLIAM KENNON, M.D., Nashville

3:25 P.M.

The Indications for Light Coagulation

WESLEY MCKINNEY, M.D., Memphis

3:45 P.M.

Scleral Buckling Procedures with Encircling Polyethylene Tubes

RALPH HAMILTON, M.D., Memphis

4:10 P.M.

A Technique in the Management of Severed Canaliculus

EDWARD CAMPBELL, JR., M.D., Knoxville

TENNESSEE ACADEMY OF PREVENTIVE MEDICINE AND PUBLIC HEALTH

Parlor B Read House
TUESDAY, APRIL 11, 1961

12:30 P.M.

Luncheon—Parlor B

1:30 P.M.

Scientific Program—Parlor B

HENRY PACKER, M.D., President, presiding

Present Status of the Oral Poliomyelitis Vaccine

By: ALEXANDER D. LANGMUIR, M.D.,
Chief of the Epidemiology Branch,
Communicable Disease Center,
Public Health Service, Atlanta, Ga.

Business Meeting



TENNESSEE DIABETES ASSOCIATION

TUESDAY, APRIL 11, 1961
Georgia Room Patten Hotel

SCIENTIFIC PROGRAM

1:45 P.M.

Surgical Aspects of Endocrine Diseases of the
Pancreas

SAM STEPHENSON, M.D., Nashville

2:15 P.M.

Psychologic Factors in Control of Diabetes

RICHARD C. SEXTON, JR., M.D., Knoxville

2:45 P.M.

Current Concepts of the Ocular Changes of
Diabetes

ALLEN LAWRENCE, M.D., Nashville

3:15 P.M.

Intermission

3:30 P.M.

Some Experiences in the Management of Diabetic
Acidosis

JOHN W. RUNYON, M.D., Memphis

4:00 P.M.

Use of Oral Hypoglycemic Agents in Juvenile
Diabetes

HENRY H. LONG, M.D., Knoxville

Business Meeting

4:30 P.M.—Members only

EVENING PROGRAM

6:30 P.M.

Refreshments
Annual Banquet

Speaker: T. S. DANOWSKI, M.D., Professor of
Research Medicine, University of Pittsburgh
"Diabetes mellitus: Attitudes and platitudes"



TENNESSEE PSYCHIATRIC ASSOCIATION

TUESDAY, APRIL 11, 1961
Parlor E Read House

12:00 Noon-1:00 P.M.

Social Hour

1:00 P.M.-2:00 P.M.

Luncheon

SCIENTIFIC PROGRAM

2:00 P.M.

The Psychiatrist in a Semi-rural Area

By: MARSHALL D. HOGAN, M.D., Bristol

2:45 P.M.

Residential Treatment and the Therapeutic Team

By: GEORGE W. MARTIN, M.D., Memphis, Direc-
tor of the Memphis and Shelby County
Mental Health Center

3:30 P.M.

Some Aspects of Psychoanalysis of the Foster-
Child

By: JAMES C. GAMMILL, M.D., Nashville
Discussion Period

4:15 P.M.

Business Meeting

7:00 P.M.

Dinner Meeting at the Fairyland Club



WOMAN'S AUXILIARY TO THE TENNESSEE STATE MEDICAL ASSOCIATION

TUESDAY, APRIL 11, 1961
Patten Hotel

PROGRAM

8:00 A.M.-12:00 Noon

Registration

9:30 A.M.-12:00 Noon

General Convention Session—Parlors F, G, and
H

9:30 A.M.-4:00 P.M.

Arts and Crafts—Parlors D and E

Hospitality Room Open

12:30 P.M.

Annual Luncheon Honoring National President,
Presentation of Awards, and Installation of
Officers—Tennessee Room

4:00-5:00

Pick up Entries from Arts and Crafts



Wednesday, April 12, 1961 General Scientific Program

Ballroom Read House
WM. I. PROFFITT, M.D., Cleveland, Vice President,
TSMA, presiding

9:00 A.M.

Numbness of the Hand

By: BLAND W. CANNON, M.D., Memphis
Discussed by: AUGUSTUS McCRAVEY, M.D.,
Chattanooga

9:30 A.M.

Margins of Safety in the Therapy of Diabetes Mellitus

By: T. S. DANOWSKI, M.D., Professor of Research Medicine, University of Pittsburgh School of Medicine, Pittsburgh, Pennsylvania

10:00 A.M.

Visit Exhibits

10:30 A.M.

A Changing Surgical Attack on Complicated Peptic Ulcer

By: W. H. REMINE, M.D., Head of A Section of Surgery, Mayo Clinic, Rochester, Minnesota, and Assistant Professor of Surgery, Mayo Foundation, Graduate School, University of Minnesota, Minneapolis, Minnesota

11:00 A.M.

Panel:—Importance of Electrolytes

Moderator: GUY M. FRANCIS, M.D., Chattanooga
T. S. DANOWSKI, M.D., Pittsburgh
W. H. REMINE, M.D., Minneapolis
M. JAMES SWEENEY, M.D., Memphis

**SPECIALTY SOCIETIES****WOMAN'S AUXILIARY TO THE TENNESSEE STATE MEDICAL ASSOCIATION****WEDNESDAY, APRIL 12, 1961****Patten Hotel** **Parlors D and E**

9:00 A.M.

Continental Breakfast—Parlors D and E

9:30 A.M.

Post-Convention Board Meeting—Parlors D and E**THE ROCKING CHAIR***(Continued from page 98)*

provides us with a medical reason for using the rocker. As he concludes the rocking chair is cheap and easily obtainable, has no side effects, is non-toxic and needs no prescription other than the recommendation of a wise and thoughtful family physician deeply concerned with his patients' health.

A. B. S.

References

Editorial: Rock Back and Live, Life 50:34, Feb. 17, 1961.

Swan, R. C.: The Therapeutic Value of The Rocking Chair, The Lancet 2:1441, Dec. 31, 1960.

DEATHS

Dr. Harold Erle Paty, 66, Nashville, died February 3rd at a local hospital after an extended illness.

Dr. W. W. Rippy, Loretto, died September 13th, 1960.

PROGRAMS AND NEWS OF MEDICAL SOCIETIES**Chattanooga-Hamilton County Medical Society**

The Society's regular monthly meeting was conducted on January 26th in the Interstate Building. The scientific program consisted of the following: "Annual Heart Symposium" arranged by the Chattanooga Area Heart Association—E. Wayne Gilley, M.D., Chairman. Speakers were C. Walton Lillihei, M.D., James V. Warren, M.D. and William T. Folley, M.D. Grand Rounds were made at Baroness Erlanger Hospital, where afternoon lectures were held following the tour. The social hour and banquet was held at the Chattanooga Golf and Country Club. Banquet speaker was C. Walton Lillihei, M.D. and his subject was "Surgical Treatment of Cardiovascular Disease."

The February 7th meeting conducted in the Interstate Building consisted of the following program: "Malignant Melanoma in a Colored Female Child" by Daniel H. Framm, M.D.; and "Experiences with Shunts in the Central Nervous System" by Walter E. Boehm, M.D.

Consolidated Medical Assembly of West Tennessee

The Society conducted its regular monthly meeting on February 7th in the New Southern Hotel. New officers of the society were installed. Approximately 40 physicians were present for the medical discussions following dinner which were presented by two clinical instructors of the Vanderbilt Medical School staff. Dr. William H. Edwards of Nashville, instructor of clinical surgery, spoke on "Surgical Consideration in Occlusive Tissues of Carotid and Innominate Arteries." Dr. J. L. Herrington, Jr., Nashville, assistant professor of clinical surgery, spoke on "Re-evaluation of Current Concepts in Treatment of Duodenal Ulcers." Dr. Earl Williamson and Dr. W. M. Phillips, both of Jackson, led the discussions on the speakers' topics.

Greene County Medical Society

The Society met for its regular monthly meeting at the Elks Club on February 7. In the business meeting, the delegate and alternate delegate to the Tennessee State Medical Association was elected.

The scientific program consisted of a paper by Dr. James M. Sams, Johnson City, who spoke on the subject "Changes in the Treatment of Ear Disease over the Last Fifteen Years."

Knoxville Academy of Medicine

The Society conducted its regular monthly meeting on February 14th in the Academy of Medicine Building. The program consisted of brief descriptions of current research which is being carried on in the Knoxville area. The speakers were obtained by the program committee from several sources in Knoxville.

Nashville Academy of Medicine and

Davidson County Medical Society

The Society met in the St. Thomas Hospital Cafeteria on February 14th. A dinner preceded the meeting. The program consisted of a report on the recent White House Conference on Aging, with emphasis on the medical aspects. This report was given by Dr. Thomas F. Frist, co-chairman of the Tennessee delegation.

Memphis-Shelby County Medical Society

The Society's monthly meeting conducted on December 6th, was held at the Memphis Country Club. The occasion was the annual dinner meeting for election of officers. Reports from the Secretary and the Treasurer were given.

Dr. Duane Carr gave the President's annual report. Dr. Bland Cannon assumed the office as President and Dr. Alvin J. Ingram was named President-elect. The Vice President elected was Dr. A. Roy Tyrer, Jr., with Dr. Charles L. Clarke elected secretary and Dr. William T. Satterfield, Treasurer.

Roane County Medical Society

The Society's regular meeting was conducted on February 28th in the Oak Ridge Hospital. The scientific program consisted

of a paper entitled "Differential Diagnosis of Jaundice" by Dr. Malcolm P. Tyor, Associate Professor of Medicine, Duke University School of Medicine, Durham, North Carolina.

NATIONAL NEWS

Rules Fight in Congress

The vote to enlarge the House Rules Committee to 15 was postponed from January 26 to January 31 as a result of mounting opposition to the proposal.

The outcome of the rules fight will not directly affect the proposals for a compulsory social security health care plan for the aged, but it certainly will affect, and may already have affected, the President's relationship with Congress. . . . On January 26, Rep. Thomas G. Abernethy, one of two Mississippi Congressmen who supported Kennedy during his campaign, said the President's desire to liberalize the Rules Committee would backfire. . . . He explained: "Liberals insisted on a fight over the rules. They got it. The wounds opened are deep and lasting. Kennedy could have stopped the fight but he didn't. The result, he will have trouble."

The Month in Washington

(From the Washington Office, AMA)

President Kennedy asked Congress to increase social security taxes to finance limited medical care for elderly persons on the social security rolls, a plan opposed by the medical profession.

The proposal was part of a sweeping health program outlined by Kennedy in a special message to Congress during his first month in the White House. The Kennedy program also included federal aid for construction and operation of medical schools, scholarships for medical and dental students, grants for community nursing and hospital services, stepped-up medical research and expanded federal activity in the field of child and youth health.

Under Kennedy's proposal, social security beneficiaries 65 years and older could get up to 90 days of hospitalization for each single

illness. However, the patient would have to pay \$10 daily for the first nine days of hospitalization with a minimum payment of \$20.

After release from a hospital, the elderly person could get up to 180 days in a nursing home. The social security program also would provide for payment by the government of all out-patient diagnostic costs in excess of \$20 and community visiting nurse services.

The program would be financed by increased social security taxes by one-fourth of one per cent on both employers and workers and by three-eighths of one per cent on self-employed persons covered by social security. The social security tax base also would be increased from the present \$4,800 a year to \$5,000.

Enactment of this proposal, coupled with another Kennedy recommendation and increases in the social security tax already scheduled in the law, would mean that workers and employers would be paying \$250 each in social security taxes in 1969.

Nationwide television audiences were told by an American Medical Association spokesman why the medical profession supports the Kerr-Mills program of medical care for the aged and opposes tying it in with social security.

In television debates with Senator Hubert Humphrey (D., Minn.) on NBC-TV and Walter Reuther, organized labor spokesman, on CBS-TV, Dr. Edward R. Annis of Miami, Florida, described the Kerr-Mills program as "sound and effective." He said it "must be given the chance it deserves."

"Congress passed it because it believed that the important thing was to help the people who need help; to help them quickly; and to help them through the machinery of local government," Dr. Annis said.

The A.M.A. Board of Trustees charged the CBS network with "misrepresentations, bias, and distortions" on another program: "The Business of Health—Medicine, Money and Politics." The network edited out of the taped program the A.M.A.'s true position on health care for the aged:

"The A.M.A. believes that any medical care plan is both unsound and unfair which would compel working people to shoulder increased social security taxes to finance

health costs of all those over 65 (under social security), rich and poor alike, regardless of whether they want or need such help and which at the same time, ignores, millions of indigent elderly who do need help."

Kennedy's health program faced strong opposition in Congress. The consensus of Capital Hill observers were that it stood a 50-50 chance of getting Congressional approval but not before it had been cut down. There were some who doubted that the Administration's program for medical care of the aged would be acted upon, at least by both houses of Congress before next year.

Even some Democratic Congressmen with the liberal label were taken back by the scope of Kennedy's health program. Arthur H. Motley, President of the Chamber of Commerce of the United States, warned that social security taxes are being increased to a point "where people might rebel against the whole Social Security System." He contended that this nation's personal medical care system is the best of any large nation.

"It's worth crusading for and that is what the Chamber is doing," Motley said.

'Private' Practice, Uncle's Style

Nearly one out of every three Americans, including more than 22 million veterans, is eligible today to receive at no cost to himself some degree of federal medical care. This is Uncle Sam's list of patients as of January 1, 1961:

22,515,000 living veterans.

5,200,000 military personnel and their dependents.

300,000 beneficiaries of the public health service, including 200,000 seamen.

5,100,000 public assistance recipients.

14,000,000 additional persons over age 65, newly eligible under medical assistance for the aged.

370,000 Indians and Alaskan natives receiving care in 56 federal hospitals or from contract physicians.

4,000,000 beneficiaries of the Federal Bureau of Employees' Compensation, including 1,730,000 under the new federal employees' health insurance program.

3,450,000 dependents of federal employees under the government workers' insurance plan.

MEDICAL NEWS IN TENNESSEE

Dr. E. Vincent Askey, AMA President to Speak at 126 Annual Meeting

The Program Committee of the Tennessee State Medical Association has announced that Dr. E. Vincent Askey of Los Angeles, California, will be among the guest speakers at the annual meeting of TSMA at the Read House in Chattanooga, and will address the Association membership on April 10. His subject will be "Not Upon a Few, But Upon All."

Please see the special page in this issue of the JOURNAL for personal information.

Proposed Health Plan Provides for State Aid on Basis of Need

Local health departments will benefit greatly from the State Administration's public health program, according to a recent announcement. The proposed program sets up a minimum public service for each county for the first time and establishes a formula for the distribution of state aid primarily on the basis need. It was reported that this was the main feature of a health program recommended to the Legislature.

Under the proposed formula, the state would underwrite 20 per cent of the costs of the minimum program for health departments in the richer counties and up to 80 per cent of the costs in the poorer counties. This would assure each county one health officer for each 100,000 residents and one nurse for each 12,000.

Each county's share of state aid would be determined under the formula from its population and what per cent of the minimum program could be financed locally. Property values would be considered in setting the wealth of a county.

VA Conference on Chemotherapy of Tuberculosis

Some 400 physicians from throughout the nation recently attended in Memphis the 20th Veterans Administration-Armed Forces Conference on Chemotherapy of Tuberculosis. The conference was conducted February 6-9, in the Claridge Hotel.

Mid-South Postgraduate Medical Assembly

Dr. Gilbert J. Levy, Memphis pediatrician, is the new President-elect of the Mid-South Postgraduate Medical Assembly. Dr. Levy will succeed Dr. Lon E. Reed of Hot Springs, Arkansas.

Close to 1,500 physicians and medical students from seven states converged on Memphis recently for the 72nd annual meeting of the Mid-South Postgraduate Medical Assembly. The meeting was conducted February 14-17, 1961.

Twenty specialists, eminent in their various fields, lectured during the scientific gatherings. Subjects discussed were cancer, heart disease and respiratory infections.

A complete program and the speakers were included in this section of the JOURNAL in the February issue.

Tennessee Inhalation Therapy Workshop

The Tennessee Inhalation Therapy Association conducted a workshop at Nashville, February 20-21. It was the third annual workshop and meeting of the Association.

American Society of Facial Plastic Surgeons

The American Society of Facial Plastic Surgery conducted the quarterly meeting in Memphis on February 9-10. The meeting was conducted in the Peabody Hotel. Speakers on the scientific program included Dr. Douglas L. Gordon, assistant professor of medicine at Louisiana State University in Baton Rouge; Dr. W. S. Gilmer, Dr. S. E. Salvatore and Dr. L. W. Diggs, all of Memphis.

Tennessee General Assembly Approves Plan for Care of Aged

A bill has been approved in the Tennessee General Assembly to provide medical care for the aged. The measure permits Tennessee to participate in the medical care plan approved at the last session of Congress. The federal government would pay 76½% of the program in Tennessee and state and counties would furnish the rest. This is an enabling act that will permit Tennessee to participate in the provisions of the Kerr-Mills Bill, passed in the 85th Congress.

Memphis Eye, Ear, Nose and Throat Convention

The Memphis Eye, Ear, Nose and Throat Convention convened at the Peabody Hotel, February 11-13, 1961. Six eminent specialists in ophthalmology and otolaryngology presented topics of interest.

Lecturers were Dr. Lyman G. Richards of Massachusetts Institute of Technology in Cambridge; Dr. Harry P. Schenck of the University of Pennsylvania in Philadelphia; Dr. Theodore E. Walsh of Washington University in St. Louis, Missouri; Dr. Frank D. Costenbader of Washington Hospital Center, Washington, D.C.; Dr. Michael J. Hogan and Dr. Robert N. Shaffer, both of the University of California School of Medicine in San Francisco.

More than 100 eye, ear, nose and throat specialists from the mid-south, plus others from seven neighboring states were in attendance.

University of Tennessee College of Medicine

"Slipped discs" will be the target of a three-year collaborative study by the Division of Pathology and Microbiology at the University of Tennessee Medical Units, and the Chemistry Department at Southwestern under a new \$95,048 grant.

The research supported by the U.S. Public Health Service, will be under the direction of Dr. Harold Lyons, professor of chemistry at Southwestern and Dr. Douglas H. Sprunt, professor and chief of the UT Division of Pathology and Microbiology.

★

The fifth annual heart research tour co-sponsored by the Memphis Heart Association and the University of Tennessee School of Medicine began on February 5th. The tour included demonstrations by the departments of pathology, radiology and surgery at UT. Other demonstrations covered embolism in the coronary arteries, equipment used in observing the heart and an artificial heart machine used in open-heart surgery on animals.

★

A postgraduate program in clinical hematology was conducted at the UT College of Medicine January 25-27. The program was

designed for pathologists, internists and other physicians interested in laboratory medicine and combined theory and practice in the study of blood diseases.

★

The United States Public Health Service has approved continuation of a \$5,000 cancer research grant to the University of Tennessee College of Dentistry.

PERSONAL NEWS

Dr. Elgin P. Kintner, Maryville, has been named chairman of the Governmental Affairs Committee of the Blount County Chamber of Commerce.

Dr. Van Fletcher, Chattanooga, has been elected to the Board of the Tennessee Hospital Service Association.

Dr. Leland Johnson, Jackson, recently addressed the Henry County Heart Council.

Dr. C. Robert Clark, Chattanooga, was the recent speaker before the Chattanooga Society of X-ray Technicians.

Dr. David McCallie, Chattanooga, presented a progress report recently to the Kiwanis Club.

Dr. William H. Tanksley, Nashville, has joined the medical staff of the Veterans Administration Hospital at Murfreesboro.

Dr. Thomas F. Frist, Nashville, recently addressed the Nashville Rotary Club.

Dr. McChesney Goodall, Knoxville, has been appointed medical director of University of Tennessee Memorial Research Center and Hospital.

Dr. Joseph L. Willoughby has opened his office for the practice of medicine in Franklin.

Dr. Nat T. Winston, Jr., Chattanooga, was the speaker at the annual meeting of the Council on Community Forces.

Dr. Morris D. Ferguson, Lebanon, has been elected president of the Wilson County Medical Society. Other officers elected were **Dr. Charles T. Lowe**, vice president and **Dr. T. R. Puryear**, secretary-treasurer.

Dr. Hammond Pride, Knoxville, recently spoke before the Knox County Council for Retarded Children.

Dr. William Doak, Donelson, was the recent speaker before the Donelson Rotary Club.

Dr. James E. Hampton, formerly of Memphis, has announced the opening of his office for the practice of medicine in Murfreesboro.

Dr. Marion R. Moore, Memphis, discussed "Your Mind and Your Health" at the Jewish Community Center.

Dr. Mildred Stahlman, Nashville, has received a Lederle Medical Faculty Award in recognition of her "outstanding research."

Dr. Samuel S. Riven, Nashville, recently addressed the Nashville Kiwanis Club.

Dr. Addison B. Scoville, Jr., Nashville, discussed

the role of the American Diabetes Association at a meeting of the Nashville Dietetic Association.

Dr. John L. Armstrong, Somerville, President of the TAGP was the principal speaker recently at a dinner meeting of the Andrew Jackson Academy of General Practice in Nashville. His subject was "The Role of the General Practitioner in Medicine."

Recently addressing the Tennessee Nurses' Association, District No. 4, was **Dr. James H. Spaulding** of Chattanooga.

Dr. George Zirkle, Knoxville, is the new alumni chapter president of Virginia Polytechnic Institute.

Dr. Frank S. Farris, Rogersville, has become associated with **Dr. Walter L. Goforth** in Rogersville.

The speaker before the Private Duty Nurses, District No. 2, was **Dr. Charles Gerald Peagler**, Knoxville, who spoke on the subject "Post-operative Care of Open Heart and Chest Surgery."

Dr. Joe Henderson, Maryville, is the new president of the Blount County Medical Society.

Dr. James E. Waters, Jr., Knoxville, has opened his office for the practice of medicine in that city.

Dr. B. W. King, Millington, has been named Outstanding Young Man of the Year.

Dr. John Crowell and **Robert W. Boatwright** recently addressed the meeting of the Physicians' Assistants Association.

Dr. Martin Bronson, Elizabethton, recently addressed the John Sevier Chapter of the Tennessee Academy of General Practice, at their meeting in Erwin.

Dr. James W. Hedden and **Dr. J. B. Davis** announce the opening of their office for the general practice of medicine, in Chattanooga.

Dr. Billy M. Hightower, Lebanon, has been named Wilson County's Outstanding Young Man of 1960.

Dr. W. E. Boyce, Hohenwald, has resumed operation of the Boyce Clinic Hospital following the closing of the hospital by **Dr. W. C. Keeton**.

Dr. J. Kelley Avery, Union City, has been nominated for the Distinguished Service Award as the city's "Young Man of the Year." Dr. Avery is a vice president of TSMA.

Dr. J. B. Witherington, Memphis, has been elected president of the Methodist Hospital medical staff.

Dr. Morris D. Cohen, Memphis, has closed his children's clinic and will leave for Miami, Florida. He will enter a three-year course of study in psychiatry at the University of Miami Medical School.

Dr. W. C. Keeton, formerly of Hohenwald, has closed his office and moved to Decatur, Alabama.

Dr. David E. Rogers, Nashville, head of the department of medicine at Vanderbilt University School of Medicine as received the "distinguished service award" of the Nashville Jaycees.

Dr. John E. Neumann, Paris, is the new president of the Henry County Medical Society.

Dr. Crawford W. Adams, Nashville, has become president of the medical staff of St. Thomas Hos-

pital. **Dr. Benjamin Fowler**, Nashville, has been named president-elect.

Dr. Walter L. Diveley, Nashville, has been named chairman of the Board of Directors of the Nashville Academy of Medicine.

Dr. William A. DeSautelle, Knoxville, announces the removal of his offices from 1025 Hamilton National Bank Building to 3136 North Broadway.

Recent speakers on a Chattanooga Television station have been **Dr. R. M. Landry**, **Dr. Carl A. Hartung** and **Dr. Maurice Rawlings**, all of Chattanooga. They participated on the program entitled "Your Doctor Speaking."

ANNOUNCEMENTS

Tennessee Society of Plastic Surgeons

The Tennessee Society of Plastic Surgeons will meet on Sunday, April 9th at the Lakeshore Lodge, in Chattanooga. The meeting will be conducted at 2:00 p.m. The society is meeting in conjunction with the annual meeting of the Tennessee State Medical Association.

American Board of Obstetrics and Gynecology

Application for certification in the American Board of Obstetrics and Gynecology, new and reopened, for the 1962 Part 1 Examinations are now being accepted. All candidates are urged to make such application at the earliest possible date. The deadline date for receipt of applications is August the first, 1961. *No applications can be accepted after that date.*

Candidates for admission to the Examinations are required to submit with their application a plain typewritten list of all patients admitted to the hospitals where they practice, for the year preceding their application, or the year prior to their request for reopening of their application. This information is to be attested to by the Record Librarian of the hospital or hospitals and submitted on paper 8½" x 11". Necessary details to be contained in the list of admissions is outlined in the Bulletin and must be followed closely. Current bulletins outlining present requirements may be obtained by writing to the Secretary's office, Robert L. Faulkner, M.D., Executive Secretary and Treasurer, American Board of Obstetrics and Gynecology, 2105 Adelbert Road, Cleveland 6, Ohio.

Physicians Recently Licensed to Practice Medicine in Tennessee

Michal, Mary L., Nashville
Stobbe, William R., Houston, Texas
Watson, Jerry F., Memphis

Hancock, James C., Jr., Memphis
Avery, Bebe A. B., Memphis
Gentry, Robert H., Jr., Knoxville
Sullivan, Earl J., Johnson City
Henderson, Robert J., Jr., Chattanooga
Gaba, William F., Memphis
Sgalitzer, George W., Ft. Jackson, S. C.
Gillit, Charles M., Hendersonville
Gill, Charles M., Nashville
Scott, Edwin L., Memphis
Thompson, Bobby G., Wichita, Kansas
Burlison, Pat Ed, Memphis
Johnson, Jerry R., Knoxville
Smith, Gladstone E., Jr., Dover
Lipsett, Philip, Jr., Greeneville
Wilson, John M., Greeneville
Heyssel, Robert M., Nashville
Phythyon, James M., Nashville
Elliott, James I., Memphis
Sinats, Reinis, Goldsboro, N. C.

Postgraduate Day in Psychiatry

The Central State Hospital in collaboration with the Division of Postgraduate Instruction of Vanderbilt University School of Medicine is offering a one-day postgraduate course on Thursday, May 18, at the Central State Hospital. This deals with the patient coming home from a mental hospital, and the role of the family physician in keeping him

home. This program will serve to acquaint the physician with the treatment activities within the hospital and such topics as drug therapy, recreational therapy, occupational therapy, etc.

Dr. William F. Sheeley, Chief of the General Practitioner Education Project of the American Psychiatric Association will be the guest speaker. The course is approved for Category I credit by the American Academy of General Practice.

Central Regional Meeting of the American College of Gastroenterology

The Central Regional Meeting of the American College of Gastroenterology will be held in Milwaukee, Wisc., Sunday afternoon, 16 April 1961. The scientific sessions will be held at the Schroeder Hotel at 2:00 p.m., following the semi-annual meeting of the College's Board of Trustees.

Participating in the meeting will be Dr. Andrew E. Cyrus, Jr., Milwaukee, Wisconsin; Dr. D. O. Ferris, Rochester, Minnesota; Dr. John Hurley, Milwaukee, Wisconsin; Dr. Raymond J. Jackman, Rochester, Minnesota; Dr. LeRoy Sims, Madison, Wisconsin; and Dr. Jean Spencer, Chicago, Illinois.

Members of the medical profession are cordially invited to attend. A copy of the program may be obtained by writing to the Secretary, American College of Gastroenterology, 33 West 60th Street, New York 23, New York.

PLACEMENT SERVICE

The Placement Service of the Tennessee State Medical Association is designed to assist doctors and communities to get together. Further information and contacts on both physicians and communities are available from the Public Service Office, 112 Louise Avenue, Nashville 5, Tennessee.

Locations Wanted

A 31 year old married physician desires associate practice in ob-gyn in east Tennessee community 20,000 to 50,000. Methodist. Graduate University of Maryland. Available spring 1961. LW-349

A 46 year old married physician desires to establish ob-gyn practice in Tennessee community of 50,000-100,000. Retiring from military service. Prefers clinical or associate practice. Baptist. Graduate Tulane Medical School. Two years residency. Available immediately. LW-364

A 31 year old physician, married, desires to establish ob-gyn practice in west or middle Tennessee community of 30,000-50,000. Will consider clinical, associate or assistant practice. Tennessee license; residency. Methodist. Graduate of Vanderbilt University. Available July 1961. LW-366

A 31 year old married physician desires clinical practice in general surgery in Tennessee community of 25,000 or over. Tennessee license; residency. Catholic. Graduate University of Tennessee. Available immediately. LW-372

A 42 year old married physician desires group, partnership or private practice in radiology in east or middle Tennessee community. Diplomate of the American Board of Radiology. Protestant. Graduate University of Basel, Switzerland. Available immediately. LW-376

A 49 year old married physician desires position as hospital administrator, director of professional education in hospital, administrative director in industry or insurance, etc. Prefers location in or near large city but will locate elsewhere. Baptist. Tennessee license; 8 years residency. Part I, American Board of Surgery. Graduate Vanderbilt School of Medicine. Available immediately. LW-379

A 30 year old married physician would like to establish general practice, either clinical, assistant, associate or industrial in middle Tennessee community. Tennessee license. Church of Christ. Graduate University of Tennessee College of Medicine. Available April 1961. LW-391

A 30 year old married physician would like clinical or associate general practice in east or middle Tennessee community of 15,000 or over. Tennessee license; residency; surgery training; Methodist. Graduate University of Tennessee. Available July 1, 1961. LW-398

A 33 year old married general practitioner wishes to enter clinical, associate or assistant practice in middle Tennessee community of 5,000 to 20,000. Residency training. Protestant. Graduate University of Tennessee. Available April 1961. LW-400

A 32 year old married general practitioner with interest in obstetrics, interested in industrial, associate or assistant practice in middle Tennessee community of 50,000 or over. Baptist. Graduate University of Louisville. Available with few weeks notice. LW-401

Physicians Wanted

Northwest Tennessee community of 1,200 (trade area 3,000) needs general practitioner. Office space available and good hospital facilities sixteen miles. Near large recreational area. Good location. PW-129

Pediatrician with 2 years internship and 1 year residency training needed in middle Tennessee community with new hospital. Office building located near hospital. Office furnished except for doctor's private office and equipment. PW-137

A rural, middle Tennessee community to 800 in need of general practitioner to replace physician who left for military service. Office space; and hospital privileges available nearby. Near good hunting and fishing area. Good location. PW-139

Clinic in east Tennessee community of 30,000 has opening for internist (Board eligible) who is interested in associate practice with congenial group. Good location. Newly constructed and fully equipped. PW-143

General practitioner who is interested in preventive and occupational medicine is needed in industrial plant in east Tennessee community of 28,000. Office space and equipment furnished. Regular working hours, good salary, fringe benefits. PW-145

Internist in large western Tennessee city wishes associate to share modern air-conditioned office with complete diagnostic equipment. Adequate technical help. PW-150

Southeastern community of 10,000 in need of general practitioner. Office space available with six months free rent. Eighteen miles from large city. Good location. PW-154

Large clinic in large middle Tennessee town in need of general practitioner with residency training. Excellent location, good working conditions and congenial group. PW-156

A physician with experience in general practice with interest in OB and/or surgery, needed in middle Tennessee area. 18 bed hospital facilities available. Will furnish office space, utilities and telephone. Age 30-45. Associate or assistant status. PW-158

One or more physicians needed in middle Tennessee town with trade area of 6,500. Only other physician in county retired. Hospital, completely staffed, available. Excellent opportunity for good growing practice. PW-159

FOR SALE—Repossessed small hospital in growing middle Tennessee city (population approximately 6,500). No initial down payment, assume notes. Or, will introduce or salary physician who will take over hospital. No other active physician in county. Need and opportunity great. PW-160

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Clinical Evaluation Of Chlordiazepoxide*

G. H. AIVAZIAN, M.D.,† Memphis, Tennessee

The advent of the first tranquilizing drugs in clinical psychiatry brought about a revolution in the treatment of mental illness and was followed by an explosive increase in the numbers and types of available psychotherapeutic drugs. The extensive clinical use of these drugs has far surpassed the rate of development of an experimental program for determining their mode of action.¹ The deficiency of our knowledge of the specific mechanisms of action coupled with lack of agreement on the pathogenesis of mental disease represents a major problem in modern psychiatry. Nevertheless, there is now almost universal agreement that these drugs have been very beneficial therapeutically for patients with various mental disorders, many of whom were not previously helped by other forms of treatment. The extent of their efficacy is a subject which remains controversial,² partly because of the highly subjective nature of most measurements of clinical improvement.³ There is increasing agreement, however, that the various tranquilizers provide symptomatic relief in mental disorders but that they do not alter the basic psychotic or psychoneurotic processes in a permanent way.^{2,3} In spite of these problems, great strides have been made in determining the therapeutic value of drugs, by the empirical method of clinical trials. These should be carried out in as exacting a manner as possible, suitable controls used when feasible and extensive follow-up trials carried out.

The purpose of this study was to investi-

gate the effectiveness of a new psychotherapeutic agent, chlordiazepoxide, (Librium†) in the treatment of patients with various types of mental disorders and to investigate relationships between therapeutic results and variables. An attempt was made to determine the period for which further treatment is required, if any, the maintenance dose and the relapse rate in improved patients. The study was initiated in November 1959, and has been active for one year. Interest in this new drug was due to favorable reports in clinical trials involving a wide range of diagnostic categories including anxiety and tension states, depression, schizophrenia, involutional psychotic reactions, alcoholism, and epilepsy.⁴⁻⁹

The three primary actions of this drug are tranquilization, muscle relaxation and anticonvulsant effect.¹⁰ An important consideration in the evaluation of any new psychotherapeutic drug is the incidence and severity of side effects. It appears that chlordiazepoxide has a particularly high degree of safety. Drowsiness and ataxia, frequently reported side effects, are often signs of overdosage disappearing promptly when the dosage is adjusted. There has been no evidence of cardiovascular disturbances, kidney or liver damage or toxic changes in blood picture.⁴⁻¹¹

Method and Case Material

The current sample consisted of 66 patients, male and female, ranging in age from 17 to 75 years. Fifty-one patients were hospitalized and 15 were out-patients. Three diagnostic groups were included: 37 psychoneurotic patients, 15 psychotic patients, and 14 patients with personality disorders (Table 1). The selection of patients was made solely on the basis of diagnosis regardless of duration of illness, previous therapy or

*From the Department of Psychiatry, University of Tennessee College of Medicine, and Gailor Psychiatric Hospital, Memphis, Tennessee.

†This study was partially supported by a grant from Hoffmann-La Roche Laboratories, Nutley, N. J. Librium is the trade-name for chlordiazepoxide.

prognosis. Treatment was initiated following one week of observation, and patients that showed improvement within this period were not included in the sample. The drug was administered by mouth and the dosage range was 40 to 150 mg. a day given in four divided doses depending upon individual requirement.

The procedure for observation and evaluation was as follows: A record of behavior and symptomatology was made. The final evaluation of results was based on changes in behavior and symptomatology, weekly interviews, and subjective observations of patients. Results were graded according to the following scale: *marked improvement*—completely symptom-free, able to return home, and resume normal activities and occupation; *moderate improvement*—largely symptom-free, able to return home and resume normal activities and occupation in part; *slight improvement*—partial symptomatic relief, further hospitalization definitely indicated; and *not improved*—no change in symptomatology or behavior.

Twenty-two patients were kept on chlordiazepoxide after their discharge from the hospital for a period of one to ten months. The maintenance dose during this period was 10 to 40 mg. a day.

The follow-up period extended from 4 to 10 months following discharge, and includes patients both with and without maintenance treatment with the drug.

Combined therapy was tried on 18 patients, 6 of whom exhibited anxiety reaction with depressive features and 12 who had depressive reaction with anxiety; of these, 6 are included in Table 1. Each group was initially treated with either chlordiazepoxide, or an antidepressive drug or electroshock therapy respectively. In those patients where results were unsatisfactory combined therapy consisting of chlordiazepoxide and an antidepressive drug (monaminoxidase inhibitor or imipramine) was used.

Laboratory investigations included complete blood count and hemoglobin, urinalysis and urine for urobilinogen prior to treatment and at weekly intervals.

Results

The results according to diagnosis are

summarized in table 1. The improvement rate was significantly high in certain psychoneurotic reactions and insignificant in the psychotic and personality disorder groups.

Table 1
RESULTS OF TREATMENT WITH CHLORDIAZEPOXIDE IN
66 PATIENTS WITH MENTAL DISORDERS

Diagnosis	No. of Pa- tients	Results Improved			Not Im- proved
		Marked	Moderate	Slight	
Psychoneuroses					
Anxiety Reaction	24	12	8	4	—
Phobic Reaction	1	1	—	—	—
Conversion Reaction	2	—	—	—	2
Depressive Reaction	4	—	1	3	—
Depression with Anxiety	6	2	1	2	1
Psychoses					
Schizophrenic Reaction	13	—	2	4	7
Involuntal Psychotic Reaction	2	—	1	1	—
Personality Disorder	14	3	—	7	4
TOTALS	66	18	13	21	14

Group I: Psychoses.

Of 15 patients in this group 13 had schizophrenia and 2 involuntal psychosis. Three patients improved on a daily dose of 40 mg., improvement appearing within 5, 7, and 20 days respectively. In 7 patients the daily dose was increased to 100 mg. and in 2 other patients to 150 mg., and treatment was extended over a period of one to three months. None of these improved. The improved patients had been subjected to severe environmental stress, and anxiety had been a prominent symptom. The results were not related to diagnosis, duration of illness, or age.

Group II: Personality disorders.

Our experience was disappointing in this group of 14 patients with various types of personality disorder, and the following associated conditions: alcoholism (6), sexual deviation (2), organic brain disease (3), diabetes mellitus (1), and migraine type headache (1). The immediate reasons for hospitalization were: anxiety, fears, depression, suicidal threats or attempts, insomnia, alcoholism, or anti-social behavior. Only 3 patients showed satisfactory improvement, all 3 were alcoholics. One patient relapsed after two months, and the remaining 2 have maintained improvement for six and eight months respectively, during which time

they have received psychotherapeutic assistance and chlordiazepoxide. In the 6 alcoholic patients, as well as in additional 11 alcoholics not included in this sample, the new drug was found helpful in relieving withdrawal symptoms, in particular, tension and anxiety.

Group III: *Psychoneurotic reactions.*

Thirty-seven patients with psychoneurotic reactions were included in this group. Six patients with mixed symptomatology have been grouped under the heading of depression with anxiety in table 1. Patients with conversion reaction and depressive reaction failed to respond to the drug. Four depressed patients subsequently received electroshock treatment and 3 improved. The most favorable responses were observed among 24 patients with anxiety reaction and one phobic reaction. Of 6 having anxiety depression 3 improved. It is noteworthy that improvement among psychoneurotic patients was prompt and appeared within one to seven days in 14 patients and eight to fifteen days in 7 patients on a daily dose of 40 mg. In the patients who failed to respond within one week, prolongation of treatment and increase in the dosage of the medication proved ineffective except for one patient who improved on the twenty-third day. Often the response was "dramatic" within one or two days and was well maintained thereafter. The initial response was subjective, and was followed by objective changes within a few days. In one patient placebo and psychotherapy were used for eleven weeks without response. Within 24 hours after initiation of chlordiazepoxide the patient reported very considerable improvement in her condition. In 3 other patients routine hospital care, psychotherapeutic assistance and placebo were used for one to three weeks, followed by chlordiazepoxide. Improvement appeared immediately following the addition of the drug to the therapeutic regimen.

Of the 22 patients who were on maintenance doses of chlordiazepoxide up to ten months, adequate follow-up results are available on 15 improved patients, as shown in table 2. Among 9 patients with marked improvement, one relapsed. Two others relapsed after withdrawal of medication but

improved when it was reinstituted. Among 6 patients with moderate improvement five relapsed while on medication. (Table 2.)

Table 2

Duration of Treatment Months	No. of Patients	Relapses No. of Patients
10	2	None
6	1	1
5	2	None
4	3	2
3	5	2
2	2	1

Among 9 patients with marked improvement, 1 relapsed. Two others relapsed after withdrawal of medication but improved when chlordiazepoxide was reinstated.

Among 6 patients with moderate improvement 5 relapsed while on medication.

In the 18 patients who received combined therapy the results were more effective; the combination of two drugs produced more satisfactory relief of symptoms than either drug alone.

In general, the favorable responses were relief from tension and anxiety, increased tolerance, curbing of hostile and aggressive tendencies, improved sleep pattern and appetite.

Typical observations by patients were: "I feel more relaxed, am not tense, feel calm within, am not bothered as much by what they say, do not lose my temper, sleep better." Others have stated that they feel calm but do not like it, cannot push as hard as they used to, and have diminished initiative for daily tasks.

Side effects were mild and transient, neither withdrawal of the drug nor reduction of the dosage having been necessary in any patient. The following side effects occurred: mild drowsiness in 8 patients; mild hypotension in 2; skin rash involving only the palms of the hands in 1; and tremors of hands in 1 patient. Three outpatients complained of loss of initiative and drive and were unwilling to continue medication. Laboratory findings: There were no abnormal findings in the blood and urine specimens tested.

Discussion

The two syndromes in which satisfactory results appeared were anxiety reactions and anxiety depressions.

For purposes of this discussion the moderate and markedly improved patients will

be referred to as *improved*, and the slightly improved and the unimproved as *not improved*.

Possible correlation between clinical results and the following factors were explored: sex, duration of illness, symptomatology, stress, previous personality and adjustment, combined therapy, including psychotherapy and/or other drugs together with chlordiazepoxide.

No correlation appeared between sex, duration of illness, symptomatology and therapy with this drug. A possible relationship to age may be noted from the fact that those who improved ranged in age from 28 to 58 years of age, while the unimproved patients were under 23 years.

The target symptoms in all patients with anxiety reaction were similar,—namely, anxiety, tension, somatic complaints, fears. Some patients also exhibited depressive features, headaches, and compulsive behavior. However, in spite of the similarity in target symptoms 4 patients with anxiety reaction and 3 patients with anxiety depression failed to improve. There were three significant differences between the improved and the unimproved group: 1) severity of the stress factor, 2) previous personality type, and 3) adjustment pattern to stress. In the unimproved, although the symptoms and average duration of the present episode were the same as in the improved group, personality disorders of varying severity with long periods of previous maladjustment were present, manifested either by depression, anxiety or other types of neurotic symptomatology and behavior. Moreover, these patients also had serious problems of sexual adjustment, permanent physical disability, or extreme dependency needs. Only in one of the 5 unimproved patients was the stress factor preceding the present illness moderately severe. In the improved group (12 patients), however, not only were the previous personality and adjustment satisfactory, but the stress factor had been severe in 11, moderate in 6, and undetermined in 4.

Partial or complete relief from anxiety and tension was related chronologically to the administration of chlordiazepoxide regardless of what other therapy was in effect at that time. Moreover, when the drug

was withdrawn from the therapeutic regimen 2 patients relapsed but improved immediately when the drug was reinstituted. On the other hand, 5 improved patients relapsed during maintenance therapy with chlordiazepoxide. These 5 patients had: history of previous emotional disturbance, moderate personality defects, and the stress had been mild. While the follow-up sample is small, it is noteworthy that the relapse rate was higher during the first four months than thereafter.

These observations support the view that, in general, the effect of chlordiazepoxide is symptomatic and that the course of the illness is not influenced *per se*. The unimproved cases of anxiety reaction and those that relapsed while still on the drug may suggest not only quantitative but also qualitative differences as to cause, subjective experiences, and objective observations that were interpreted as anxiety.

Summary

The purpose of this study was to investigate the effectiveness of chlordiazepoxide in the treatment of mental disorder, and to investigate relationships between therapeutic results, the relapse rate, and variables selected.

The sample consisted of 66 male and female patients, ranging in age from 17 to 75 years. The dosage range was 40 to 150 mg. a day, given in 3 or 4 divided doses. Three diagnostic groups were included: 37 psychoneurotic patients, 25 were improved (anxiety reactions, and anxiety depressions, and one phobic reaction); 15 psychotic patients, 3 were improved; and 14 patients with personality disorder, 3 were improved.

Among 15 improved patients that were followed-up for a period of 4 to 10 months, 6 relapsed while on maintenance dosage.

No relationship appeared between improvement and age, sex, dosage, duration of illness and symptomatology *per se*.

The improvement rate was definitely higher and the relapse rate lower, in patients with satisfactory previous personality and adjustment patterns and where the illness was precipitated by external stress.

Conclusions

1. Chlordiazepoxide was found effective in the treatment of patients with anxiety

reactions. Best therapeutic results appeared in patients with a well adjusted previous personality and where the illness was precipitated by external stress.

2. The new drug was found helpful in relieving anxiety and tension associated with various syndromes, but was ineffective in modifying the underlying personality disorder or psychosis.

3. Chlordiazepoxide was free of toxic effects and a safe drug in a dosage range of 40 mg. to 150 mg. a day. Side effects were mild and transient.

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Effects of Excess Sodium Chloride on Blood Lipids: A Possible Factor in Coronary Heart Disease. G. Douglas Talbott, M.D., John R. Keys, M.D., Bessie M. Keating, M.T., and Beatrice Finkelstein, M.D., *Ann. Int. Med.* 54:257, 1961.

The authors introduced the subject by pointing out that the primitive man did not add salt to his food so long as he either lived by the sea or ate his meat raw. The picture is quite different in the more progressive societies. In a recent study of a random group of Americans, other investigators found a daily salt intake up to 24 Gm., and concluded that the average American male consumed 10 Gm. per day. Conservative calculation places our average salt consumption at least 8 Gm. in excess of estimated metabolic requirements. The authors wondered if it was merely chance that both the use of sodium chloride and the incidence of coronary heart disease have increased hand in hand with the rising tide of progress. The authors also point out that with the increasing suspicion being directed toward the role of hyperlipoidemia in the etiology of coronary heart disease, it was felt that it was desirable to investigate all alterable factors which might contribute to the hyperlipemic state. A project was therefore designed specifically to permit observation of the effect of ingested sodium chloride on each of the several blood values in man, particularly on the clearance time of artificially elevated blood fat.

A project was set up which included 20 apparently normal men, ranging in age from 18 to 39 years, each one acting as his own control, starting with an average sodium chloride intake of 4 Gm.

per day and finally being forced to 20 Gm. a day of sodium chloride intake. Individual values were determined for (1) total cholesterol; (2) cholesterol esters; (3) phospholipids; (4) atheroindex; (5) total lipids; (6) total esterified fatty acids; (7) neutral fatty acids; (8) beta lipoproteins; and (9) alpha lipoproteins. After these initial determinations were made, the blood fat was artificially elevated by injecting Lipomul, 5 ml./Kg. of body weight, into the blood stream of each subject. Blood lipid clearance time was then calculated by determining the respective values of the above-listed blood lipid factors immediately after infusion and again at two, four and 24 hours thereafter.

An analysis of the findings showed that both the cholesterol and the cholesterol esters were depressed at most points in time observed, except at the 24 hour post-Lipomul point; serum triglycerides and fatty acids were significantly increased at the corresponding times. All other blood values remained essentially unchanged. The authors thought, although clinical conclusions were not yet warranted, that the statistical significance of the fractional lipid variations noted in this experiment may indicate the desirability of restricting excessive intake of sodium chloride as a means of controlling coronary artery disease. This seems particularly so because other investigators have found in comparative lipid studies in normal and coronary subjects, the most obvious differential was constantly elevated serum triglyceride level in the coronary group. (Abstracted for the Middle Tennessee Heart Association by Peirce M. Ross, M.D., Nashville.)

CASE REPORT

Congenital Absence of the Gall Bladder

B. C. Collins, M.D., Memphis, Tenn.

Congenital absence of the gall bladder is a relatively rare finding, and is often associated with disease of the bile ducts. The following case report is illustrative.

A 57 year old woman was admitted to St. Joseph Hospital on November 8, 1959, complaining of upper abdominal pain, nausea, vomiting and jaundice of one week's duration.

She had enjoyed good health for the past 20 years. A previous illness was due to a large ovarian tumor which had been satisfactorily treated by surgical removal. She had not been taking any medications.

The pain in the current illness was severe and colicky. It occurred in the epigastrium, radiated to the back, and was also felt in the right upper quadrant, though to a lesser degree. Her symptoms were aggravated by eating and relieved by vomiting. Two days after admission she observed that her bowel movements were liquid and had become white in color.

There was no history of cardiac symptoms or of heart disease, and she denied dyspnea, angina and pedal edema. The urine had been dark in color for the past three or four days before admission.

Physical examination revealed a well developed, somewhat obese, cooperative, white jaundiced woman lying quietly in bed but complaining of severe epigastric pain radiating to the back. The vital signs were normal and stable. Blood pressure was 130/80. Positive physical findings were generalized icterus of moderate degree, marked tenderness and rigidity in the epigastric region, and heart sounds which were faint and distant.

The chest x-ray film showed the lungs to be clear, the heart somewhat distorted and at the upper limit of normal in size with increased prominence of the left ventricle. The right leaf of the diaphragm was elevated.

The electrocardiogram was interpreted as ab-

normal with nonspecific S-T and T wave changes. A consulting cardiologist diagnosed the findings as due arteriosclerotic heart disease, compensated and with no evidence of impaired cardiac reserve.

The significant laboratory findings were a hematocrit of 44%, WBC. count of 13,000 with 93% segmented neutrophils. The icteric index was 45, the transaminase was 46. The urinalysis was negative except for 8-10 WBC. and 3-5 RBC. per field.

At *operation* a upper right rectus incision was made. Fibrous adhesions were found between the stomach and abdominal wall. The liver was slightly swollen and mottled in color, with rounded edges. The fossa which normally contains the gall bladder was empty, revealing a white opaque mass less than 1 cm. in diameter at near the bifurcation of the common bile duct into the right and left hepatic ducts. The mass appeared to be the vestigial stump of a gall bladder. The common bile duct was dilated to 2 cm., and its wall was greatly thickened. Several stones were palpated through the wall of the common bile duct. The duct was opened and 7 stones varying from 0.5 to 2 cm. in size were removed. A 6 mm. dilator was passed through the sphincter of Oddi. A T-tube was inserted. An operative cholangiogram showed excellent filling of the hepatic and common ducts with much dilation. No dye was visualized beyond the ampulla. The common bile duct was re-explored to rule out the possibility of a stone at the sphincter of Oddi, and a larger probe was passed into the duodenum. A second cholangiogram was essentially the same as the first.

The patient had an uneventful postoperative course. The jaundice cleared rapidly. The bile drainage from the T-tube cleared and decreased in volume. The T-tube was removed on the tenth postoperative day. A cholangiogram made just before removing the tube revealed no stones and showed the dye to be entering the duodenum freely. She was maintained on dehydrocholic acid for approximately six months. She has been entirely free of any symptoms for the past 11 months.

CASE REPORT

Photosensitivity to Declomycin

Marvin L. Wolff, M.D.,* Memphis, Tenn.

The purpose of this report is to illustrate the photosensitivity reaction to demethylchlortetracycline (Declomycin). A number of such cases have been reported recently.^{1, 2, 3} The Medical Director of Lederle Laboratories, in discussing the problem, observed that in analyzing 2,682 reports on the clinical use of this antibiotic, "a photodynamic reaction to sunlight has been observed in 40 patients."¹

On October 22, 1960, a 26 year old white woman was given Declomycin for treatment of an upper respiratory infection with bronchitis. After taking only 6 capsules of 150 mg. each, in a 2 day period (a total of 900 mg.), on the third day she developed a sunburn on her face and hands while riding in a closed car. The only exposure to sun that day was through the front windshield of the car. On the fourth day (i.e., the second day without medication), she rode in an open car and was exposed to the sun for several hours. Her face and hands became extremely red, swollen, and painful, and a sharp line of demarcation was evident on her cheek between the exposed skin and skin protected from sunlight by a scarf. This patient had never before been particularly sensitive to sunlight, and had never before suffered a severe sunburn. The pain and swelling persisted for about 4 days, but the erythema of the face with the line of demarcation persisted for approximately 3 weeks. No specific treatment for this reaction was given; improvement was spontaneous.

*From the Department of Medicine, University of Tennessee College of Medicine, Memphis, Tenn.



The photograph was taken 4 days after the initial burn.

My conclusion is that Declomycin should be prescribed with caution. This patient's reaction occurred in October; it would undoubtedly have been worse if it had occurred during the summer months.

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STAFF CONFERENCE

Nashville General Hospital*

Vascular Collapse Treated by Intra-aortic Transfusion

DR. FRANK E. WHITACRE: Everyone who takes care of obstetrical patients at times must encounter difficult cases of placenta previa. The condition is not unusual as the incidence will average about 1 case in 140 pregnancies. Most opinions as to etiology are speculative. Poor nutrition of the recently fertilized ovum has been implicated. It is probable that abnormalities of the placenta are concerned with at least some cases of placenta previa. Obviously the larger the placenta, the more likely a part of it will lie over or near the internal os. It is interesting however, that about three out of four cases are in multiparas. Be that as it may, the pathology is probably due to the fact that a tremendous vascularity is called forth in the relatively quiescent lower uterine segment. During the third trimester of pregnancy retraction and effacement occur in the development of the lower uterine segment resulting in some separation. This consists of a splitting of the decidual basalis from the myometrium which must lead into the abnormally placed maternal venus sinuses. For this reason placenta previa has been called unavoidable hemorrhage. There is rarely concealed hemorrhage associated with placenta previa and the visible blood loss is a good index of the actual blood loss. Typically, bleeding occurs without pain and hemorrhages are usually multiple and only rarely single. The diagnosis is usually easy not only because of the bleeding but because abnormal presentation of the fetus is frequent and the presenting part is floating. Rectal examinations have no place in an obstetrical patient bleeding from any cause because it is impossible to obtain sufficient information and well placed clots may be disturbed which may increase bleeding. The rectal approach does not allow the operator to control such bleeding. One should not neg-

lect to palpate the presenting part through the vaginal fornices on pelvic examination. In so doing one will find a separation of several centimeters between the examining finger and the presenting part. In such an instance it is unnecessary for one to push the finger through the os. A double set-up in an operating room is in order and a speculum examination is the first thing done. This is important for it is not only necessary to exclude abruptio placenta, but also ruptured varices, cervical or urethral polyps, cervical erosions and carcinoma of the cervix.

We have recently had a case of placenta previa where the usual treatment was modified. A consideration of this is very important.

DR. H. RAY STURKLE, JR.: The patient is a 38 year old colored female, gravida 7, para 6, abortus 0. Her last menstrual period was 2-4-60 with E.D.C. 11-11-60. She was admitted to the hospital at 31 weeks of gestation. She gave a history of passing a number of small blood clots for 4 days, but had had no active bleeding. For the past 8 months she had had sporadic bleeding varying from a few drops to 50 cc or more. On admission she had a pulse rate of 92, BP 110/70; heart, lungs and general physical examination were all within normal limits. The uterus was approximately the size of an 8 month's gestation with the baby in a cephalic presentation. Fetal heart tones of 150 were in the LLQ.

Shortly after admission a placentogram was done revealing the fetal head to be high with no definite evidence of placenta previa. A low lying left posterior placenta could not be ruled out. The fetal age by x-ray was 33 weeks. Throughout her first two days of hospitalization, the patient had moderate intermittent vaginal bleeding and a few small blood clots were passed. On the second hospital day the blood pressure was noted to have fallen to 70/40 with pulse rate of 120. An intravenous blood transfusion was begun but the patient responded poorly and was taken to the operating room for a double set-up procedure. In lithotomy position, a vaginal examination was done. The cervix was noted to be clean and no active bleeding was evident. A large gauze vaginal pack was inserted and the patient positioned and prepared for laparotomy.

Cesarean section was accomplished under Pen-thothal and gas-oxygen-ether anesthesia. A 4 lb. 8½ oz. female infant, who was moderately depressed and required resuscitation, was delivered. The marginal placenta previa was left and posterior. During the course of the procedure the patient's pulse remained at a rate of 120 to 130 with a blood pressure of 60/30 to 110/50 which was very labile. Midway in the operative procedure the blood pressure fell to 70/40 and re-

*From the Department of Obstetrics and Gynecology of the Nashville General Hospital, Nashville, Tennessee.

*From the
Executive Director*

ORGANIZATIONAL NEWS

Kerr-Mills Bill Versus Social Security Approach

● In view of the current trends of the new administration in Washington, which is pushing the socialized medicine type of legislation, it is extremely important for physicians to carefully consider the reasons the Kerr-Mills legislation as opposed to the social security approach for medical care to the aged.

Five Reasons Why The Kerr-Mills Law Merits Support

- 1. It provides legislation which makes it possible to help every aged American who needs help for health care. Its benefits are based on need and local determination.
- 2. The program is voluntary, not compulsory. It will supplement, not supplant, individual voluntary insurance or prepayment.
- 3. The administration will be on a state basis. It leaves it up to the states to develop programs that answer their own particular needs.
- 4. The new law is economical. The tax dollar will be spent to best advantage by paying for benefits for those who need help and not wasting tax dollars on help for those who are willing and able to take care of their own health care costs.
- 5. Less federal control. Each state can set up its own program according to needs determined. Negotiations can be conducted with state officials for the program under Kerr-Mills, not making it necessary to abide by rigid standards established by a Washington Bureau.

Vigorous Action Required for Socialized Medicine Fight

● A knock-down drag-out fight in the present U.S. Congress over the issue of compulsory government health care appears to be inevitable. The administration's plan is covered in HR-4222, introduced in the House of Representatives by Congressman King of California. Companion bill in the Senate is S-909 by Senator Anderson of New Mexico, an ardent advocate of Forand-type legislation. The current plan does not cover physicians' services in office, home and hospital. It is predicted that should the basic principle of tacking health services onto social security as called for in the King Bill, the next step will be add professional services to the scheme. It will be necessary for physicians to pull out all the stops to bring about the defeat of the proposal which is the same in principle as the Forand-type bills of a year ago.

What You as an Individual Physician Can Do

- What your county medical society, the Tennessee State Medical Association and the AMA can do to bring about the defeat of the socialistic plan of health care, will depend primarily on what you are willing to do—as an individual. The issue is in the political arena. Here are some suggestions for action on the part of physicians:
 - (1) Inform yourself regarding the proposals; also the Kerr-Mills Law which takes care of the aged medically indigent.
 - (2) Acquaint yourself with the dangers of compulsory government health care against the advantages of the Kerr-Mills Law.
 - (3) Pass on this information to your patients, friends, neighbors, members of other professions and businesses of your community . . . citizens, generally, should be alerted.

(4) Offer to speak to civic and community groups in favor of the Kerr-Mills Law and against compulsory health care . . . the Kennedy administration's plan. (5) Secure literature to go with your statements, or to be mailed, or to be given out otherwise to patients and other citizens in your community. (6) See officers and leaders in other professional and business groups and urge them to arouse the interest of their members against the socialistic plan. (7) Urge all of the people you contact to communicate with their congressman, urging him to oppose HR-4222. This is the crux of the entire plan of action. (8) Here are some of the allied health groups whose members should be contacted: Dentists, Pharmacists, Hospital Administrators, Medical Assistants, Technicians, and others. The following business groups should be contacted: Farm Bureau, Chambers of Commerce, Junior Chambers of Commerce, Manufacturers' Association, Industrial Association, Retail Merchants Association and other trade associations, civic and luncheon clubs, Bankers' Associations, and miscellaneous business groups.

Physicians are acquainted with hundreds and thousands of people in the groups enumerated above. It's up to each physician to act if you believe that the socialized medicine approach through the social security scheme is bad.

National Legislative Conference Conducted In Chicago

● The Medical Legislative Conference sponsored by the AMA in Chicago, March 18-19, was attended by some 350 representatives from the 50 states. . . . The state representatives were informed of the legislative situation, the issues involved in health care of the aged, and the position of the American Hospital Association, Blue Shield, National Association of Manufacturers, and the American Farm Bureau. . . . Registrants also learned about AMA's public relations and legislative programs, about background material available to them, the functions of the Washington Office, the Council on Legislative Activities and the Field Service Division, and how local medical societies have been able to wage effective legislative campaigns. . . . In summary, the meeting cleared the air for state representatives on AMA's national legislative program, and provided force and direction to legislative campaigns at the local level.

Cost of Medical Care

● A data booklet for doctors' offices can now be obtained. The booklet contains facts and figures on the cost of medical care. It explains present day medical care costs—and it is important that physicians' patients become aware of this information. Copies can be obtained through the TSMA headquarters office. Send in your request and the pamphlets will be mailed to you.

The Wind-up from the Tennessee General Assembly

● Governor Ellington signed into Law the Medical Examination Bill. The Governor has also provided for an appropriation which will insure that, for the first time, Tennessee will have a uniform system of medical examiners, at the county and state level. . . . The bill to amend the nursing licensure law to permit licensure without examination, providing the applicant had received training in the Armed Forces and had other experience, was withdrawn. . . . HB 915, which would require statements of purpose and submission to the State of audits by professional groups conducting fund-raising campaigns was passed by the Senate and sent to the Governor. . . . The Senate concurred in joint resolutions requiring the Legislative Council to make studies of: (1) Problems of mentally ill children. (2) Traffic safety. (3) Alcoholism.

Every bill introduced in the legislature was screened and studied by TSMA personnel, particularly those which related to health and medicine, were carefully analyzed.

Public Service

THE TENNESSEE TEN



Governor Buford Ellington signs the TSMA-sponsored Post Mortem Examination Bill. Looking on are Rep. Ernest Crouch, McMinnville, who guided the bill to passage in the House; Dr. R. H. Kampmeier, TSMA Secretary-Editor; Dr. W. O. Vaughan, TSMA Board Chairman; Dr. Charles C. Trabue, IV, TSMA Legislative Committee Chairman, and Dr. R. H. Hutcheson, State Commissioner of Public Health.

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Ellington Says Funds Available For Post Mortem Law

● Governor Buford Ellington says there is money available to staff, equip, and operate the Division of Post Mortem Examination in the State Department of Public Health.

This assurance from the Governor came in a letter to Dr. Charles C. Trabue, IV, TSMA Legislative and Public Policy Committee chairman, after Ellington had vetoed the item in the Miscellaneous Appropriations Bill allocating \$40,000 annually for the Post Mortem Examination Division. Ellington explained that the funds were available in another appropriation.

The law goes into effect in 93 counties of Tennessee's 95 counties July 1st.

Legislature Acts On Medical Bills

● Among the 1,990 bills introduced in both houses of the Tennessee Legislature were many which related directly or indirectly to the field of medical care.

Most were administration-sponsored measures and were introduced at the request of the Tennessee Departments of Public and Mental Health.

The only two measures which TSMA opposed failed to pass. One would have permitted chiroprodists to use narcotics and the other would have granted licensure as practical nurses without examination to certain persons who had received training in the armed forces.

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TSMA Rebutts Ribicoff Charges

● Officials of the Tennessee State Medical Association strongly denied charges made against AMA and its members by Secretary of Health, Education and Welfare Abraham Ribicoff. The charges were made by Ribicoff in a televised interview March 19. Ribicoff declared that "the AMA and doctors are trying to infect the American public against the Kennedy administration's social-security financed medical care program for the aged with the bogus claim of socialized medicine".

Statements Labeled "Completely False"

● He made three other charges, which TSMA officials branded as "completely false". These were:

1. That many physicians are afraid to support the Kennedy program because the AMA exercises very strong sanctions against individual doctors who speak up their minds.

2. That AMA realizes the need for a medical care program but doesn't want it achieved.

3. That doctors are in no way involved in the Kennedy administration proposal.

In a statement issued to all Tennessee daily newspapers, Dr. W. O. Vaughan, TSMA Board Chairman, and Dr. Charles C. Trabue, IV, TSMA Legislative Committee Chairman, pointed out that AMA does not exercise sanctions against its members who publicly disagree with its views, and cited as evidence transcript of testimony to this effect given before Congressional committees.

As for the need for a program of medical aid to the elderly, Dr. Vaughan and Dr. Trabue stated that AMA does recognize the need for such a program and is vigorously supporting the Kerr-Mills Law "which provides such care while its programs are controlled at the state and local levels and available on the basis of need".

Physician participation in the Kennedy proposal is evidenced by the fact that it would provide "normal hospital services" which include those of pathologists, radiologists, and anesthesiologists, the statement said.

"It is perhaps coincidental but quite significant that a wire service story appeared in many newspapers Monday morning to the effect that the Kennedy administration is using 'every tactic in the book' to obtain passage of its bills.

"It is to be hoped that such perversion of the truth as that done by Mr. Ribicoff is not typical of the administration's tactics," the statement concluded.



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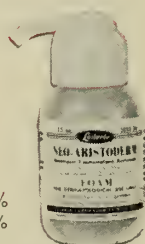
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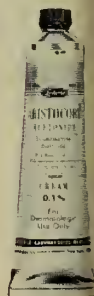


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The anti-inflammatory and antipruritic efficacy of triamcinolone acetonide was shown by the prompt control of itching and resolution of affected areas. Cahn, M. M., and Levy, E. J.: A Comparison of Topical Corticosteroids: Triamcinolone Acetonide, Prednisolone, Fluorometholone, and Hydrocortisone.

Antibiotic Med. & Clin. Ther. 6:734 [Dec.] 1959.

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oranges will be nutritionally best for your patients. It will contain abundant amounts of vitamin C and rich, natural fruit sugars.

It's good nutrition to encourage people to drink orange juice. It makes good sense to persuade them to drink orange juice that you *know* tastes good, has the right sugar-acid ratio, and is packed full of nutritionally important vitamin C.

mained there despite continued I.V. infusion of blood. An intra-aortic transfusion of 250 cc. of whole blood was administered. The blood pressure promptly returned to a level of 110/50 to 120/80 and stabilized there throughout the remainder of the operative procedure. The pulse was 120 to 130 which gradually fell over the next 4 hours to a level of 80. There were no further adverse changes in the vital signs. A total of 2700 cc. of whole blood were given. The patient's hemoglobin on admission was 9.9 gms. per 100 cc., on the first postoperative day it was 11.7 and on the 4th postoperative day 10.5. Urinalysis was normal and the blood serology was negative. Postoperatively the patient remained afebrile and had no further difficulties. She was discharged on the 7th postoperative day. We can take up comments and questions all at the same time.

DR. JUNIUS L. CROSSETT, JR.: Dr. Whitacre, on your direction I was the one who gave the intra-aortic transfusion and I wondered how widespread the use of this procedure actually is. It was remarkable how a falling blood pressure of 60 or less systolic came back to 120/80 in 20 minutes.

DR. WESLEY OSBORNE: Is the aorta the best artery for transfusion purposes?

DR. TROY BOHANNON: Another question comes to mind. Why is transfusion in the aorta desirable when the blood is moving away from the heart?

DR. WHITACRE: I am sure intra-arterial transfusions have been done for many years, but their use is probably infrequent. I think that the hypogastric artery has usually been used for intra-arterial transfusion in instances where the abdomen is opened because it is the only major artery in the lower part of the body that can be tied off

without complications. In this case a 10 gauge needle was used at an angle of about 35°. It is probable that a needle of smaller bore would have been more desirable. The oblique insertion of the needle through an arterial wall as thick as the aorta gives little opportunity for hematoma formation. The coronary arteries depend upon the intra-aortic pressure for their blood flow so a well nourished myocardium immediately takes the place of an ischemic one. Another important consideration is that transfusion on the venous side in a patient who is depleted by severe hemorrhage may cause some degree of right heart dilatation. Consequently blood flow is slowed which causes more opportunity for the pooling of venous blood.

Of course, blood must be given under pressure during intra-arterial transfusions. The bulb from a sphygmomanometer on the air vent of the blood flask is satisfactory for this purpose. This patient was treated before a recent report by Diefendorf and Jones appeared in "Obstetrics and Gynecology." In cases where there has been severe blood loss it takes a long time to restore the blood pressure and general condition of the patient to normal by administering transfusions. If a laparotomy is necessary, it seems reasonable to give at least 250 to 300 cc. of blood by intra-aortic transfusion at the time of the operation.

I'm sorry that time does not permit further discussion of this most interesting obstetrical complication.

CLINICOPATHOLOGIC CONFERENCE

Hemangiosarcoma of Rib*

This 75 year old retired sales representative was admitted to the Baptist Memorial Hospital for generalized weakness and marked weight loss. In March of 1959, he was seen by his physician for vertigo, which occurred particularly on changes of position. He weighed 173 pounds, had an hematocrit of 52% and sed. rate of 24 mm. per hour. The rest of his examination, including a chest film, was reported as within normal limits. In July of 1959, he had an episode of watery diarrhea without cramping. Stool examinations were positive to guaiac but without ova and parasites. A barium enema and sigmoidoscopic examination were non-revealing. At that time he weighed 162 pounds, had an hematocrit of 50% and a sed. rate of 14 mm. per hour. One month later he was again seen because of left, lower anterior chest pain, low grade fever and cough. His cough was non-productive, weight 155 pounds, hematocrit 44% and sed. rate of 37 mm. per hour. His symptoms slowly subsided on erythromycin therapy.

In September 1959, he weighed 145 pounds, had left chest pain, and was extensively studied as an outpatient. Laboratory studies showed an hematocrit of 42% and sed. rate of 46 mm. per hour. His white count was 8,500 with 80 segs., 3 bands, 12 lymphocytes, 4 monocytes, and 1 eosinophil. Total bilirubin was 0.62 mg.% and a L.E. preparation was negative, as was a latex agglutination and agglutinations for typhoid, proteus OX19, tularemia, brucellosis, and heterophile antibody. Three blood cultures were also negative. Radiographic examination of the upper G.I. tract and gallbladder were within normal limits.

He was hospitalized for the first time in December with the additional complaint of weakness of both lower extremities but particularly on the right. Physical examination showed signs of marked weight loss. The heart was significant for a grade II systolic murmur at the apex and an irregular rhythm which had been present for many years (documented by electrocardiogram as auricular fibrillation). Examination of chest and abdomen were within normal limits. All peripheral pulses were present. Neurologic examination showed a slight weakness to elevation of the left shoulder and a tendency to fall to the right. A questionable Babinski reaction was present on the left with a moderate decrease in sensation to pin prick of the right lower leg and a decrease in vibratory sense bilaterally.

Laboratory examinations disclosed a Hgb. of 9.4 Gm. with an hematocrit of 29%. Indices were calculated as an MCV of 88 and MCHC of 32.5. White and differential counts were within normal

limits, and the sed. rate was 62 mm. per hour. Bone marrow smear was not diagnostic; the paraffin section of the clot showed a fat to marrow cell ratio of 1:2 and was moderately positive for iron. No tumor cells were identified. Urine had a specific gravity of 1.025, 3 plus protein and 5 to 10 R.B.C. per high powered field. The KUB and intravenous pyelogram films were interpreted as "renal pathology cannot be definitely excluded because of poor visualization of kidneys, but there is no suspicion of pathology from the calyces that are poorly outlined." Other examinations included skull films, which showed heavy calcification of the carotid arteries throughout the siphon. The lung parenchyma was essentially clear, but it was the opinion of the attending physician that there had been the slow development of a destructive lesion in the right seventh rib. Lumbar spine films were within normal limits except for heavy calcification of the lower abdominal aorta. A second upper gastrointestinal series showed no evidence of enlargement of the retrogastric space nor change of the duodenal loop. A second barium enema was likewise within normal limits. Additional blood chemical studies included an absence of alkaline phosphatase, a uric acid of 3.1 mg., an SGOT of 24 units, a BSP. retention of 22% in 45 minutes with a total van den Bergh of 0.5, and a 2 plus cephalin flocculation within 48 hours. No Bence-Jones protein was demonstrated. Serum iron was 25 micrograms % with an unbound iron binding capacity of 167 micrograms % (both of these figures are low). Lumbar puncture disclosed a total protein of 28 mg. % and was otherwise within normal limits. Additional laboratory data obtained by the attending physician were: a total protein of 7.2 Gm. with 3.8 to 3.4 A/G ratio, phase platelet count of 260,000, and lactic acid dehydrogenase of 280 units.

The patient refused transfusions, and at his request returned home where he quietly expired.

DR. C. L. NEELY: There are several pertinent x-ray findings of this individual. Will you discuss those for us, Dr. Booth?

DR. J. L. BOOTH: We have multiple chest films on this patient that date back to 1957. On each of the chest films the hilar areas are exaggerated, but this can be attributed to vascular markings, and no definite neoplasm is seen. The aorta is a little prominent. The patient had a small cystic or destructive lesion in the right seventh rib which was barely recognizable on admission but became more prominent on subsequent films. Skull films reveal calcification in the base of the skull probably representing the carotid siphon. We have two gastro-intestinal tract examinations to review. I recall doing the last one on this man; he was so weak he could hardly stand, and most of the exami-

*M. L. Trumbull, M.D., Director, Department of Pathology, Baptist Memorial Hospital, Memphis, Tenn.

nation was done in the prone position. His stomach filled smoothly, and the duodenal cap filled out nicely. The duodenal bulb filled out well, and there was no enlargement of the head of the pancreas. A two-hour follow-up x-ray examination of the small bowel showed the stomach was empty, and there was normal progress of the barium through what appears to be a normal small bowel. The barium enema was negative. The KUB was not remarkable, and the excretory urogram showed poor concentration of the dye, something you see in patients that have had too much water or have a high blood urea nitrogen. The kidney outline suggests normal kidneys, and there is nothing in the calyces or in the ureters to suggest a neoplasm.

DR. NEELY: There is one unusual laboratory test reported in the protocol, that of lactic acid dehydrogenase. This has been reported as being elevated in neoplastic diseases and the figure given in the protocol is well within the normal limits for the method used.

DR. PHIL B. BLEECKER: The most impressive feature of this patient's illness is the multiple system involvement. He had evidence of abnormality in heart, lungs, vascular system, liver, kidney, hemopoietic system, and central nervous system. First, let's take the involvement of the heart. This man had a systolic murmur, and he had auricular fibrillation. In a person with chronic auricular fibrillation, the diagnostic possibilities are rheumatic heart disease with mitral stenosis, hyperthyroidism, and arteriosclerotic heart disease, particularly occurring at this age. This man had a pure systolic murmur but no diastolic murmur, and at his age I would feel that we could not attribute his auricular fibrillation to a rheumatic lesion. Hyperthyroidism is always a good consideration, and an elderly individual may frequently have so-called masked hyperthyroidism in which the usual signs of toxicity and enlargement of the thyroid may not be as obvious as they are in younger individuals. The weight loss was possibly a little too severe for no other signs of hyperthyroidism to be present, and the anemia was out of proportion to what you would expect with hyperthyroidism. We do not have a BMR. or a PBI. determination, but I think

we can eliminate hyperthyroidism. As far as the heart lesion is concerned, the best explanation in my opinion would be arteriosclerotic heart disease or a variant called senile heart disease, which may represent primary degeneration of the myocardium in addition to the changes due to arteriosclerosis. With weight loss, anemia, weakness, etc., subacute bacterial endocarditis is a consideration; however, this man did not have fever or a septic course, and he had negative blood cultures and a more pronounced anemia than is usually found in subacute bacterial endocarditis.

As far as the lungs are concerned, this man had at one time a definite pneumonitis. He had a chronic cough and chest pain which was one of his persisting symptoms. He had x-ray changes of pneumonitis initially, and later he had evidence of a destructive lesion in his rib. A patient may have a bronchogenic carcinoma in which the only x-ray evidence may be a pneumonitis. I think there is a good possibility that this man had a bronchogenic neoplasm in the smaller bronchi or bronchioles that spread to many parts of the body before the primary tumor became apparent.

In regard to the vascular system, he probably had a degree of atherosclerosis or arteriosclerosis that is commensurate with his age. He had definite involvement of the cerebral vessels, the aorta, and also very likely the heart. He had definite evidence of liver damage manifest by a BSP. of 22% in 45 minutes, a lowered albumin, an elevated globulin, and a positive cephalin flocculation. This is very suggestive of a primary liver disease such as cirrhosis. Primary malignancy of the liver is quite rare, and one would expect to find some degree of liver enlargement. If we consider the possibility of metastatic involvement of the liver, the liver function tests are rather markedly abnormal. These tests have been one of the stumbling blocks in picking up metastatic liver disease because frequently the liver function tests may show no abnormality. With extensive hepatic metastases the alkaline phosphatase is often elevated. Also with liver involvement we should consider such things as hemochromatosis, but this man had no skin pigmentation, no diabetes, a very low serum iron,

and a very low iron binding capacity, all of which would be against a diagnosis of hemochromatosis. I am going to retain the diagnosis of cirrhosis; however, the possibility of malignant involvement of the liver cannot be ruled out at this time.

Multiple myeloma should be considered in the presence of cystic bone lesions and a severe degree of anemia. The bone marrow is usually diagnostic, and in this case there was nothing in the peripheral blood smears or bone marrow that suggested multiple myeloma. In addition the Bence-Jones protein was negative. He had some aberrations of his kidney function manifest by very poor function on the excretory urogram, 3 plus albuminuria, and 5-10 red blood cells/hpf. The solitary urine specimen as reported had a very good specific gravity, 1.025, which would tend to exclude conditions such as chronic glomerulonephritis, for example, which could give us a blood picture similar to this. Are there any blood pressure recordings?

DR. NEELY: He was normotensive.

DR. BLEECKER: That again would lead us away from primary renal disease as the source of his difficulty. Nephrosclerosis should be considered, but usually nephrosclerosis is preceded by long term hypertension. The weight loss, weakness, and anemia can be part of the uremic state. I don't believe an N.P.N. or B.U.N. are recorded.

DR. NEELY: The B.U.N. and creatinine were both normal.

DR. BLEECKER: While I do not know the explanation for the albuminuria or hematuria, I think there is no evidence of a primary neoplasm of the kidney, and the normal B.U.N. and good specific gravity lead us away from chronic glomerulonephritis. Primary amyloid disease is an extremely rare condition often associated with skin and muscle changes, macroglossia and dysphagia, which we have no evidence of here. We have nothing to indicate that this man had a primary disease that would produce secondary amyloidosis, such as tuberculosis, bronchiectasis, or any other type of chronic suppurative disease. Frequently, too, there is a high alkaline phosphatase present in amyloid disease. In regard to the hemopoietic system my impression is that

this man had a severe normocytic, normochromic anemia and a low serum iron and iron binding capacity which indicate that the iron stores were depleted. A normocytic, normochromic anemia can be seen in a variety of situations but is usually associated with chronic infection and malignancy, and often associated with primary liver disease and chronic renal insufficiency. There is no evidence of a primary blood dyscrasia.

The neurologic findings were difficult to interpret because there was little actual neurologic deficit. This man had rather marked weakness and had some difficulty in his right leg and in one shoulder, which had been preceded by vertigo and a tendency for poor coordination. The only real finding was a questionable Babinski on one side which would indicate possibly some pyramidal tract involvement of unknown type. He had a bilateral decrease in vibratory sense, which in elderly individuals can be a normal variation. Position sense was not recorded. So often, if there is a cord lesion, the position and vibratory sense go hand in hand, and when one goes out the other goes out. The negative spinal fluid does not give us much help. The nervous system symptoms are probably unrelated to the basic disease process. It is possible that this man at the time when he was having so much trouble with vertigo had a cerebral vascular accident, probably in the brain stem, which left him with some residual.

The GI tract came into careful study because of the anemia which suggested the possibility of a tumor of the right colon. I do not believe this man had pancreatic involvement as he had no abdominal or back pain and no jaundice. I think this man had a malignancy, site unknown, but in an exercise of this sort we have to make suggestions, however wild they may be. We have to consider the kidney, but the normal contour of the kidneys and renal calyces makes it unlikely that this patient had a hypernephroma. The prostate and testicle should be considered, but any primary lesion in these areas should be apparent on local examination. There may be some GI tract disease undiscovered by the methods used, but this would be just a presumption. In

regard to the lactic acid dehydrogenase determination, it is positive in a fairly high percentage of malignancies of various sorts. In one reported series it was noticed that the only two carcinomas in the group did not have an elevated lactic acid dehydrogenase test, one was a mucous cell adenocarcinoma of the stomach and one mucous cell adenocarcinoma of the colon. In our office over the past few years we have been doing routine C-reactive protein tests on most patients. In that time every patient with a malignancy had a strongly positive C-reactive protein determination except one who had a mucous cell carcinoma of the stomach. In summary, I believe this man had a malignancy, possibly a bronchogenic carcinoma of a highly virulent type, which spread to other areas of the body without giving much in the way of local findings. I think he had cirrhosis of the liver as an additional disease.

DR. NEELY: This man initially had intermittently positive guaiac tests on the stool, and terminally he became severely anemic. I wanted Dr. Sam Hunter to say something about the neurologic symptoms.

DR. SAM HUNTER: The best way to explain this patient's symptoms of the central nervous system is on an insufficiency or ischemic basis. He probably had generalized ischemia of the brain and spinal cord as a result of the anemia and cardiac insufficiency and probably focal insufficiency due to the arteriosclerosis. The flaccid weakness that this man had would go with spinal cord insufficiency of the anterior spinal artery syndrome, and the pathologic reflex could be due to focal ischemia of the spinal cord.

DR. DAVID SCHEINBERG: We might consider one disease explaining all the symptoms, such as multiple myeloma or Gaucher's disease.

Pathologic Discussion

DR. A. SALCEDO: This patient had a hemangiosarcoma of the seventh rib with metastases to the large and small bowel, liver, spleen, pancreas, aorta and kidneys. (Fig. 1 and 2.) The heart was hypertrophied (650 Gm.) and there was generalized arteriosclerosis. The immediate cause of death was an acute bronchopneumonia and

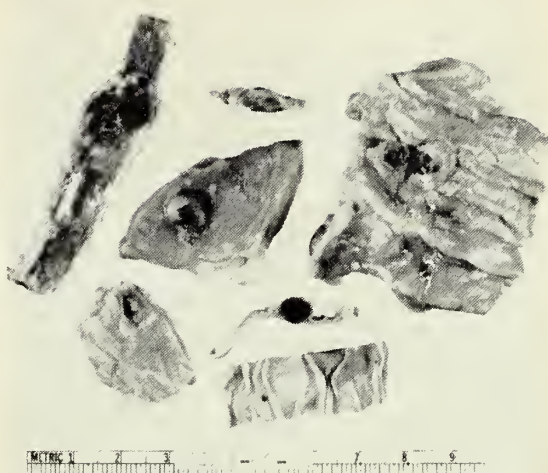


FIG. 1. Primary tumor in rib and metastatic areas in large and small bowel, pancreas, pleura and aorta.

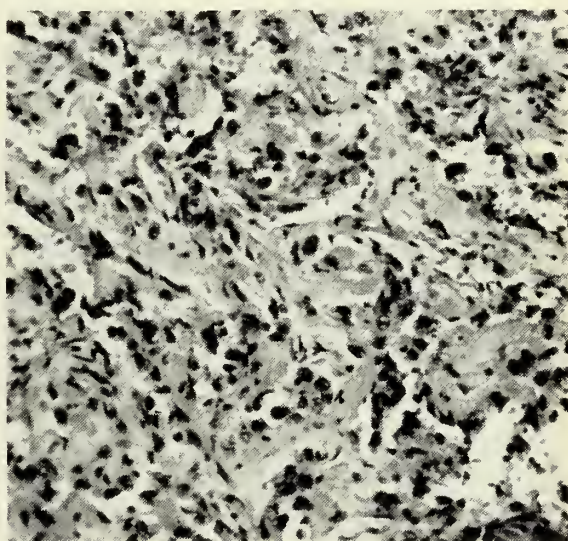


FIG. 2. A typical microscopic field of the primary tumor showing vascular spaces lined by malignant endothelial cells.

chronic and terminal acute bleeding into the gastrointestinal tract, where there was 1000 cc. of fresh blood in the region of multiple areas of metastatic sarcoma which produced multiple areas of mucosal ulceration. Multiple tumor emboli were noted in the kidney and visceral organs, and there were multiple areas of infarction of the kidneys. Hemangiosarcoma is an infrequent, if not rare, bone tumor, and Carter in his review of the world literature prior to 1956 was able to find only 17 cases. In his collected series, hemangiosarcomas appear to have no predilection for age or sex, and were quite diverse in their distribution. Most of the tumors involved multiple bones or multiple sites in a single bone and the chief clinical

manifestations were pain and swelling accompanied by progressive weight loss and anemia.

DR. PERVIS MILNOR: This patient showed a grossly abnormal BSP. which many different observers felt was due to cirrhosis of the liver. In light of the pathologic findings I think we have to consider that the abnormal BSP. represented an inadequate cardiac output, therefore inadequate circulation to the liver as evidenced by the passive congestion which was found at autopsy.

DR. JACK GREENFIELD: As I read the protocol today I was impressed with the beautiful workup this patient had with the exception of one thing from a surgical standpoint. It struck me that it would be

very easy to get a biopsy from the mass in the rib, and I wondered why it was not done.

DR. NEELY: Biopsy was refused by the patient.

DR. M. L. TRUMBULL: I am glad Dr. Milnor brought out the explanation of the elevated BSP., because I remembered the amount of metastatic tumor was pretty small in the liver. Secondly, I would like to emphasize one unusual anatomic change, and that was the tumor growing right on the intimal surface of the aorta. The tumor was embedded principally in fibrin and clot and very likely some of the man's symptoms may have been based upon the dislodgment of the small tumor emboli, lodging in different places.

President's Page

APPRECIATION



RALPH O. RYCHENER,
M.D.

As we pass from this year of great achievement to the mysteries of the year ahead, it gives me great comfort and pleasure, to know that our destinies and leadership for the future are in the hands of those who are well qualified and able to guide and direct the Association in the right paths.

It has been my privilege in the past years to be associated in some manner or degree with the organization and function of our State Medical Association, and I am particularly proud for the honor to have served this past year as your President. During my term of office, it has been my privilege to meet and to learn more

about a great many doctors that make up the State Association. I have made many friends, and perhaps some enemies, but I greatly appreciate the fact that there has been exemplified, at least to me, a great cooperation of effort and a willingness to serve in any capacity that has been indicated. It has been my experience that we have many loyal physicians in our Association. Many have proven it by their acts, and too much credit or praise cannot be given them.

There is another important segment of our profession, which although it is not practitioners of medicine, cannot be given too much praise. This is our Woman's Auxiliary. These wonderful ladies have served loyally and unselfishly in working for the programs and aims of Medicine in Tennessee. I cannot terminate my year as President without expressing, in behalf of all members of the Association, the fine work and assistance rendered by the Woman's Auxiliary.

In this my closing letter to the membership during my year as President of this Association, I should like to leave you with this thought. There is a clear responsibility for every member of our Association. Each must ask himself "*Am I Informed?*"; "*Do I Know What Is Going On?*"; "*Do I Read and Understand the Informative Materials I Receive From Our County Societies and State Medical Association?*" And each physician must ask himself whether he is doing all he can—and even a little more—to promote the best medical care for every individual through organized Medicine and in the community. Any Physician who does not do that much, and more, must live with his conscience in the months and years ahead. Those who do not measure up to these standards will have failed in his dedication and responsibility as a physician, and as a citizen, in a free democracy.

We have just completed a successful annual meeting, a year of action and achievement, and I have been honored and privileged to have had a part in it serving as President of the Tennessee State Medical Association.

Ralph O. Rychener, M.D.

President

THE NEW PRESIDENT



WILLIAM O. VAUGHAN, M.D.
NASHVILLE

WILLIAM O. VAUGHAN, M.D.

The Tennessee State Medical Association's 73rd President

WILLIAM OREN VAUGHAN, the 73rd President of the Tennessee State Medical Association, assumed office on April 10, 1961. A TSMA Board of Trustees member since 1958, Dr. Vaughan has served as Board Chairman and TSMA Treasurer since that time.

Born in Mayfield, Kentucky, where he received his elementary and high school education, he obtained his AB degree from Vanderbilt University in 1927, and his MD degree from the School of Medicine there in 1932. After serving an internship and pediatric residency at Vanderbilt Hospital, he took further postgraduate training at the Willard Parker Contagious Disease Hospital in New York City.

He was certified by the American Board of Pediatrics in 1937, entering private practice in Nashville in November of that year.

He became associate professor of pediatrics at Vanderbilt University School of Medicine in 1938, and is on the visiting medical staffs of St. Thomas, Mid-State Baptist, Vanderbilt and Nashville General hospitals.

Dr. Vaughan is Chairman of the Davidson County Board of Health Commissioners, of which he has been a member since July, 1948. He is a member of the Executive Committee of the Bill Wilkerson Hearing and Speech Center in Nashville, and was a member of the Nashville Chamber of Commerce Board of Governors in 1955-58.

A former President and Secretary-Treasurer of the Tennessee Pediatric Society, he was the first President and an organizer of the Nashville-Davidson County Mental Health Society. In 1956 he was Vice President of the Tennessee Chapter, American Academy of Pediatrics, and he was chief of the pediatric service at Mid-State Baptist hospital from the opening of that service in 1948 until 1954.

Dr. Vaughan was a member of the Nashville Academy of Medicine's Board of Directors during 1952-54, and in 1956-58, being Academy President in 1957, and its Board Chairman in 1958.

His other memberships include: The Southern Medical Association and The American Medical Association. He has served on numerous committees of the various organizations with which he is affiliated.

A member of the First Presbyterian Church in Nashville, he was a member of the Delta Kappa Epsilon social fraternity and the Alpha Kappa-Kappa Medical fraternity, both at Vanderbilt.

He and Mrs. Vaughan, the former Miss Louise Akin of Nashville, to whom he was married in November 1938, have one son, William O. Vaughan, Jr.

An avid sportsman, he enjoys golf, fishing, hunting and boating and maintains an active interest in high school, collegiate and professional athletics. A conscientious and dedicated physician, Dr. Vaughan is highly qualified to direct the affairs of the Tennessee State Medical Association.

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Address papers, discussions and scientific matter to R. H.
Kampmeier, M.D., Editor and Secretary, 8210 Vanderbilt
University Hospital, Nashville 12, Tennessee
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APRIL, 1961

EDITORIAL

SURGERY FOR DUODENAL ULCER

The treatment of many frequently encountered clinical conditions varies as new surgical technics are developed, as new instruments are devised, and as new antibiotic agents are discovered. In addition, any given treatment may be encouraged, modified or discarded, in the light of the experiences reported by observers in many different areas of our nation or other countries, as they are collected, sifted, analyzed, and crystallized into definite procedures and conclusions.

The problem of the surgical treatment of duodenal ulcer has been of concern to both internists and surgeons since 1884 when Rydygier, a Polish surgeon, completed a gastroenterostomy for benign pyloric obstruction. This procedure was popular during the first twenty-five years of the twentieth century. At that time partial gastric resection replaced gastroenterostomy, since the latter procedure was followed so often

by persistence or recurrence of the ulcer symptoms, by the repetition of hemorrhage, or by the development of marginal ulcer, (34%). The shift in opinion and the change in the surgical procedures is attested by the experiences at the Mayo Clinic. In that institution, in 1928, the operation of choice for duodenal ulcer was gastroenterostomy (70%), subtotal resection (4%) being employed far less frequently. In contrast in 1942, subtotal gastrectomy (60%) was the most commonly employed procedure. In 1940, Wangensteen emphasized the necessity for adequate gastric resection. In 1943, Diagstedt developed bilateral vagotomy as a simple and effective procedure. However, vagotomy alone gave way to vagotomy in association with subtotal gastrectomy or some modification of it, as the current procedure of choice for the surgical treatment of duodenal ulcer.

Internists in the past have been inclined to hold out for the nonsurgical treatment of duodenal ulcer because of the mortality of the procedure, the subsequent morbidity, the high percentage of poor therapeutic results, and the frequent subsequent occurrence of marginal ulcer. The improvement in anesthesia, the development of Wangensteen suction, the availability of antibiotics, and finally the introduction of vagotomy in association with partial gastrectomy, has shortened the preoperative trial time heretofore devoted to the attempt to control the symptoms of the ulcer by diet, rest, antacids, sedatives, and psychiatric management. Certainly now as in the past, pyloric obstruction, perforation, massive single hemorrhages, or repeated hemorrhages of lesser amounts, remain as indications for surgical intervention as they did forty years ago.

The experiences¹ reported from Duluth, Minnesota, are read with considerable interest. During a fifteen year period 457 patients were operated on for duodenal ulcer. A Bilroth-II resection was carried out in 440 patients (97%). The ulcer was always excised. There was an overall mortality of 9 (2%). The cause of death was usually pulmonary embolism, or pneumonia, peritonitis, hemorrhage, or cardiac complications. However, since 1947, the postoperative death rate was reduced to 0.9%. Excel-

lent or good results were observed in 92%, fair results in 5%, poor results in 3 per cent. The incidence of delayed postoperative anemia was 5%, but this complication usually responded to vitamin B₁₂ and iron therapy. Free hydrochloric acid persisted in 5.9 per cent. Recurrent or stoma ulcer was found in 3.5 per cent. Additional points of criticism were a postoperative diarrhea in 20% and weight loss in 43 per cent. "Dumping symptoms occurred most frequently in neurotic individuals and in a few who were poorly chosen for gastric resection." This latter statement is one obviously in need of critical appraisal.

That a different surgical approach has many proponents is borne out by a report of Scott, Edwards and their associates.² In 1947, L. W. Edwards began treating selected cases of duodenal ulcer by bilateral vagotomy and antral resection. In the period 1947-1960, a total of 765 patients have been subjected to these procedures. This group can be compared to the Duluth report above mentioned, since the periods of observation are comparable. The mortality rate for the interval operation is 1.4 per cent. The results have been excellent or good in 93 per cent. Only 2.5% have poor results, and 4.5% fair results. Recurrent ulcers were noted in only 4 patients, 0.5 per cent. In 2 of these an incomplete vagotomy was corrected, in a third patient it was suspected, but could not be proved. The fourth patient had a Zollinger-Ellison, pancreatic islet tumor. There were no major problems noted in regard to the maintenance of nutrition or the development of anemia. Symptoms of the dumping syndrome were noted in 25.5 per cent.

Scott and Edwards emphasize that vagotomy and antrectomy remove both the cephalic and gastric phases of acid secretion and preserves about 60% of the gastric pouch. This permits better digestive function, eliminates the ulcer, prevents recurrences, and can be done with a mortality rate no greater than that attendant to similar surgical procedures for duodenal ulcer.

It is evident that surgeons remain divided in their opinion as to which is the choice surgical procedure for duodenal ulcer. It is clear, however, that internists can take a more aggressive attitude now in directing

the poorly responsive or intractable patient into the hands of a competent surgeon. Our enthusiasm was correctly bridled twenty-five years ago, now the reins may be properly loosened.

A. W.

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DOCTORS STRENGTH MOBILIZED FOR PASSAGE OF MEDICAL EXAMINER BILL

For many years the medical profession has not been happy with the historical but outmoded coroner system which had its beginning hundreds of years ago under English law. The doctors of the State recognized that many instances of probable and possible homicide had gone uninvestigated. Shelby County took the matter into its own hands some years ago and provided for such investigations. But state legislation was needed to have effective control of the situation. This failed in past sessions of the legislature. However, now the Division of Chief Medical Examiner is law, with the responsibility placed in the Tennessee Department of Public Health and the promise of Governor Buford Ellington that the necessary funds will be made available to implement it. It is to become effective July 1, of this year.

There was much opposition to the bill in the legislature. Some developed from groups which thought they had a stake in the matter. Probably an important but intangible one was the aversion in the minds of many legislators to subscribing to a bill which permitted an autopsy on a body without permission of the next of kin. Therefore, the tactic of adding amendments which would be unacceptable to its sponsors was used in an effort to kill the bill. Legislators and others thought the bill dead when the House of Representatives passed the amendment permitting osteopaths to be appointed as county medical examiners and referred

the bill back to committee. Eight days later to the surprise of many the bill, stripped of the more objectionable amendments, was brought out again and passed.

What had happened was most significant, and actually is the point of this editorial comment, over and above the reporting of successful progressive legislation.

The doctors of Tennessee showed their strength in the passage of the bill for the establishment of the Division of the Chief Medical Examiner and his legal duties. This strength was mobilized simply by the Legislative Committee of the T.S.M.A. acquainting the physicians, who had contacts with members of the legislature in their community, of the need for this piece of progressive legislation and the request that this viewpoint be passed on to other legislators. Quickly the attitudes changed and the bill came out of committee for passage.

Not only does this show the strength of the medical profession, if it will use it, but equally, as background for future action, it also demonstrates that doctors have other interests than their pocket-books. News-writers like always to point the finger at the medical profession and its stand on certain legislation as selfish in monetary terms—how it might affect income. Here is a piece of legislation passed through the interest of the State's medical profession which by no stretch of the imagination will benefit the doctor in dollars or cents and is purely for the public good.

Having demonstrated this strength and influence of the doctors' beliefs, the physician close to the legislator, whether state or national, should wield this weapon for the good of all. Though the medical profession collectively is in bad odor, the intelligent layman recognizes his personal physician as intelligent, educated and a person of integrity, otherwise he would not desire his services.

There will be much need for the education of the legislator dealing with federal legislation by his doctor or doctors. This influence may be most helpful. Free enterprise as applied to the practice of medicine will be threatened time and again in the coming years. Here again the doctor must show his legislator friend and patient that what is at stake is not his remuneration

(the amount of money spent for medical care under socialism may well outweigh that spent under current circumstances) but rather that intangible thing, the quality of medical care, and that deterioration in medical care will be as inevitable as day follows night under certain forms of socialistic practice.

Here is a big assignment for the citizen physician.

R. H. K.

DEATHS

Dr. Franklin Blevins Bogart, 66, Chattanooga, died March 11th in a Chattanooga Hospital.

Dr. George Ed Wilson, 73, Rockwood, died March 9th as the result of an automobile accident.

PROGRAMS AND NEWS OF MEDICAL SOCIETIES

Nashville Academy of Medicine and Davidson County Medical Society

The Society met for dinner in the Baptist Hospital Auditorium on the evening of March 14th. Dr. John R. Heller, president of the Memorial Sloan-Kettering Cancer Center, was the guest speaker. He discussed "Basic Concepts of Oncology," noting recent advances and prospects for future progress. Dr. Heller was introduced to the Society members by Dr. Sidney McClellan, president-elect of the Cancer Society's local unit.

Chattanooga-Hamilton County Medical Society

The Society's regular monthly meeting was conducted on March 7th in the Interstate Auditorium. The scientific program consisted of a paper entitled "The Diagnosis of Bronchogenic Carcinoma" by Dr. John Paul Carter; and a presentation entitled "Pitfalls in Cardiac Diagnosis" by Dr. Maurice S. Rawling.

Marshall County Medical Society

The Marshall County Medical Society met on February 21st at the Gordon Hospital. New officers were elected with Dr. Joe Gordon being named president, and Dr. Wil-

liam L. Taylor, secretary-treasurer. It was announced that the next meeting will be conducted on March 21st at the Southland Cafe, at which time Dr. Hoyt Harris would present the program.

Greene County Medical Society

The Society met for its regular monthly meeting at the Elks Club on March 7th. The scientific portion of the program was presented by Dr. Philip Lipsett, a new member of the society. His subject was "Geriatric Surgery."

Knoxville Academy of Medicine

The Society met for its monthly meeting on March 14th in the auditorium of the Academy of Medicine Building. The program was presented by a legal panel. The Knoxville Bar Association presented the panel program concerned with legal problems in connection with vascular accidents of the heart and brain. The members of the panel were: Mr. Paul E. Parker, Mr. McAfee Lee, Mr. William Skaggs, and Mr. Fred Cagle. The program created considerable discussion on the basis of recent developments in this field.

Consolidated Medical Assembly of West Tennessee

The Society met on March 7th at the New Southern Hotel in Jackson. Approximately forty physicians from the area were present. The scientific program was presented by a Jackson dermatologist, Dr. Harold K. Alsbrook, who spoke on the subject "Griseofulvin in the Treatment of Fungus Infections."

Memphis-Shelby County Medical Society

The Society met in regular session in the auditorium of the Institute of Pathology Building on January 3rd. Dr. Bland W. Cannon, the in-coming president, assumed office and presided at the meeting.

The scientific program was introduced by Dr. Robert McBurney. He introduced Mr. Reed McPhillips who made a most interesting and informative talk on "Physicians' Investments." Dr. McBurney then introduced Mr. William Boone, an attorney who spoke on "Taxes and Estates for the Physician." A stimulating question period followed the talks.

NATIONAL NEWS

The Month in Washington

(From the Washington Office, AMA)

The medical profession, the U.S. Public Health Service and the National Foundation are working together in an all-out drive to get as many persons as possible to take Salk vaccine shots before the summer polio season starts.

The Sabin live polio vaccine will not be available in quantity this year.

The Salk vaccine campaign drive is directed particularly at children and younger adults in the lower economic groups.

Dr. Julian P. Price, Florence, S. C., chairman of the American Medical Association's Board of Trustees, pointed out that many children and younger adults in the lower income groups have not been inoculated against polio.

"As long as 'islands of unvaccinated persons' exist even within well-vaccinated communities, polio epidemics remain a serious threat," Dr. Price said.

Dr. Luther L. Terry, Surgeon General of the Public Health Service, emphasized the need for immunizing infants. He also said that the PHS will encourage behavioral studies to determine reasons why some people refuse to take polio shots. It is hoped that then methods may be devised to overcome such refusal. Dr. Terry called particular attention to the findings of the PHS's Advisory Committee on Poliomyelitis Control that the recommended dosage schedules may be modified to permit the administration of three shots of Salk vaccine before summer to persons who have not had any vaccine before.

Dr. Price stressed that success of the "babies and breadwinners" polio vaccine campaign depends on joint activity at the local level by medical societies, boards of health and voluntary health agencies. He expressed confidence that the more than 2,000 state and county medical societies throughout the country would cooperate wholeheartedly.

"Contrary to recent reports (in Scripps-Howard Newspapers)," Dr. Price said, "the

A.M.A. is strongly behind every effort to encourage the public to take advantage of the Salk vaccine without delay."

The Advisory Committee urged that "immediate steps . . . be taken by all interested groups to intensify drives for vaccination with the formalin-inactivated (Salk) vaccine." The Committee also endorsed the plan to direct the campaign particularly at the lower socioeconomic and younger age groups.

The Committee recommended that the first available supplies of the Sabin live, oral vaccine be utilized in the following priority order:—

1. Epidemic control, investigations and community studies.
2. Immunization of infants and pre-school children.
3. Selected area immunization of those segments of the population that are least well immunized.



Congress now has before it legislation to carry out all of President Kennedy's broad health program, but it is doubtful that the lawmakers will act upon some of it this year.

Kennedy health legislation sent to Congress recently included bills on medical education and federal grants for nursing homes and other community facilities.

The Chief Executive also recommended an expanded program to combat water pollution. He requested Congress to authorize federal grants of \$125 million a year for 10 years to help states forming interstate water pollution control agencies. He also recommended increased federal aid to communities building sewage treatment plants.

The President proposed creation of a special unit in the Public Health Service to handle both air and water pollution matters.

In accompanying letters to the presiding officers of the House and the Senate, Kennedy said he regarded his medical education proposals as the keystone of the overall health program because "we are not presently training enough (physicians) to keep up with our growing population."

The other bill would "make possible a substantial addition to the number of nursing home facilities to care for long-term patients, and . . . help relieve the shortages of home health care programs," Kennedy said.

The medical education measure would authorize federal grants for scholarships for medical and dental students. Each medical and dental school would be eligible for a total of scholarship grants equal to \$1,500 times one-fourth of the enrollment after the program had been in effect for four years. The maximum individual scholarship would be \$2,000 a year. Participating schools also would be eligible for federal grants of \$1,000 per scholarship to help pay a school's operating expenses.

The community health facilities bill would increase the annual authorization for federal grants for construction of nonprofit nursing homes from \$10 million to \$20 million and raise the minimum state allotment from \$50,000 to \$100,000 per year. It also would broaden the PHS Surgeon General's authority to conduct research, experiments and demonstrations on development and utilization of hospital services, facilities and resources to include other medical facilities.

Federal grants also would be authorized to help finance studies, experiments and demonstrations by states and other non-federal agencies for development of new or improved methods of providing health services out-side hospitals, particularly for chronically ill or aged persons.

The A.M.A. found "much to applaud" in Kennedy's overall health program, but stood fast in opposing the proposal to provide elderly persons with health care through the social security system. Dr. F. J. L. Blasingame, executive vice president of the A.M.A., said:

"We support the broad principles and the general goals of the President's program, but we cannot support his proposal for hospitalization and nursing home care for persons over 65 under social security.

"In fact, after studying this section of the President's plan, the A.M.A. more strongly than ever reaffirms its support of the Kerr-Mills law."

MEDICAL NEWS IN TENNESSEE

New Program of Medical Care for the Aged

Tennessee's Governor Ellington signed into law on February 20th, a legislative act allowing Tennessee to participate with the federal government in the new program of medical care for the aged.

The medical care bill allows the state to use federal matching funds to establish a hospitalization program for Tennesseans 65 years of age or over who are not receiving public welfare assistance. While details of the program are yet to be formulated, state officials expect it to be in operation by July 1.

The new program may be similar to a hospital care program already in effect for about 56,000 Tennesseans who receive old age assistance.

Costs of the new program approved at the last session of Congress, are borne by the federal, state and county governments. The federal government provides 76.5% of the funds with the state contributions in addition.

Half of U.S. Families Spend \$200 on Health

About 50% of American families have health care bills in excess of \$200 a year, 4.6% of the families spend more than \$1,000 a year for health services and one family in six spends more than \$500. Better than 70% of Americans have some type of health care insurance. The average health care bill for an individual is \$94 a year. The lowest bills are for children under five, whose bills average \$48 per year. The highest cost is for those over 65 whose bills average \$177 a year.

These statistics were compiled by the Health Information Foundation, an organization sponsored by 44 drug companies and other affiliated organizations including the Health Insurance Council.

University of Tennessee College of Medicine

Dr. Homer Floyd Marsh, formerly dean of the University of Miami School of Medicine, will become vice president of the Uni-

versity of Tennessee in charge of its medical units at Memphis, on July 1. The appointment has been announced by Dr. Andrew D. Holt, president of the University of Tennessee.

Dr. Marsh, a native of Indiana, was awarded a bachelor of science degree with a major in chemistry and a minor in biology in 1927 by the Indiana State Teachers College at Terre Haute, Indiana. He was awarded his master science degree in bacteriology by Purdue University in 1932 and a doctor of philosophy degree in bacteriology by Ohio State University in 1941.

★

Research grants of \$41,547 have been awarded Dr. Roger T. Sherman, assistant professor of surgery. The U.S. Army has renewed for the second year, a contract for \$31,547 for a study of the long-term effects of various plastic substances placed in the body to substitute for normal structures removed by surgery.

★

A chemistry professor and his staff have received a \$12,240 renewal grant from the National Cancer Institute. Dr. David A. Shirley and three graduate students are studying chemical compounds which might be used to fight cancer.

★

Dr. G. Daniel Copeland, instructor in medicine, is one of 25 medical scientists selected in the United States and Canada for \$30,000 John and Mary R. Markle Foundation awards. The college will receive \$6,000 a year for the next five years towards the support of Dr. Copeland and his research.

★

A three-year residency program for doctors wanting to specialize in plastic surgery has been approved at the University of Tennessee Medical Units. The program is one of the few in the South. A new department in plastic surgery is being set up in the Division of Surgery which will include research. Dr. Anthony P. Jerome will direct the new department.

The program required approval of the American Board of Plastic Surgery, American College of Surgeons, and American Medical Association.

Vanderbilt University School of Medicine

An emergency grant of \$1,500 to support a pilot study of the prevalence of nerve and muscle diseases in Middle Tennessee has been awarded to the Vanderbilt Medical School by the National Foundation for Neuromuscular Diseases.

★

Dr. Robert M. Zollinger of Columbus, Ohio, president-elect of the American College of Surgeons, delivered the ninth annual Barney Brooks Memorial Lecture at Vanderbilt University School of Medicine on February 24th. His subject was "Ulcerogenic Tumors of the Pancreas."

Dr. Zollinger, professor and chairman of the department of surgery at Ohio State University since 1946, is co-author of "Atlas of Surgical Operations" and has written a number of other works on surgery. He is a former editor of the American Journal of Surgery.

★

A grant of \$10,000 for student scholarships has been awarded to Vanderbilt University School of Medicine by the Avalon Foundation of New York. It is the first grant by a Foundation for medical scholarships across the board.

PERSONAL NEWS

Dr. Joe K. Wallace, Sweetwater, has served as Chairman of the Monroe County Area for Family Gifts for the Boy Scouts Development Fund.

Dr. Lewis W. Moore, Chattanooga, has recently served on active duty with the U.S. Air Force, serving on the course of "Medical Aspects of Modern Warfare."

Dr. Charles L. Suggs, Chattanooga, has been named chief of staff at Memorial Hospital. He succeeds **Dr. Frank S. Brannen**. **Dr. Gus J. Vlasits** was named chief of surgery, **Dr. Harry S. Anderson**, chief of medicine, and **Dr. Arch H. Bullard**, vice chief of staff. Other assignments include **Dr. Charles M. Hooper**, chief of obstetrics and gynecology; **Dr. William B. McGuire, Jr.** and **Dr. Alfred P. Rogers**, co-chairmen of the committee on interns-residents; **Dr. James S. Royal**, chief of general practice; **Dr. Van Fletcher**, chairman of credentials committee; **Dr. Chester G. Adams**, chief of anesthesiologists; **Dr. Dewitt James**, secretary of the staff; and **Dr. Bruce L. Elrod**, chief of pathology. All are from Chattanooga.

Dr. Betty Meriwether, formerly of Clarksville, is the new director of the Warren County Depart-

ment of Public Health. She succeeds **Dr. Elizabeth Lodge**, McMinnville.

Dr. Edwin F. Chobot, Jr., Chattanooga, recently addressed the City Farmers Club.

Dr. Swan Burrus, Jr., Jackson, was the guest speaker at the meeting of the Literary Club.

Dr. C. B. Roberts, Sparta, recently addressed members of the Lions, Rotary and Kiwanis clubs at a meeting in Cookeville.

Dr. Harwell Wilson, Memphis, has been named President-Elect of the Southeastern Surgical Congress. He will assume the presidency in 1962.

Dr. H. L. Monroe, Erwin, discussed "Care of the Aged" before the meeting of the Upper East Tennessee Public Health Association. The meeting was conducted in Johnson City.

Dr. Fred Ballard, Jr., Chattanooga, recently addressed the Cardiac Symposium for Nurses.

Dr. Basel M. Mixon has been named chief of anesthesiology on the staff of the Nashville Veterans Administration Hospital.

Dr. M. L. Shelby, Clarksville, was recently honored on a "This Is Your Life" program at the Civitan Club.

Dr. Van Fletcher, Chattanooga, has been elected to membership on the Board of Trustees of the Tennessee Hospital Service Association.

Dr. James Ray McKinney is now associated with the Takoma Medical group in Greeneville.

Dr. H. D. Gray, Memphis, has been appointed Medical Consultant for the Memphis Blue Cross Plan.

Dr. Henry Packer, Memphis, recently addressed the South Memphis Lions Club.

Dr. Dewitt B. James, Chattanooga, recently addressed the Engineers Club.

Dr. Robert F. Ackerman, Memphis, recently discussed "The Aging Process: How and Why We Age" at the Jewish Community Center.

Dr. Joe D. Mobley, Paris, attended the Southeastern Surgical Congress meeting at Miami Beach, Florida. **Dr. W. G. Rhea**, Paris, also attended the sessions.

Dr. Harold A. Alper, Chattanooga, has been re-elected president of the Speech and Hearing Center Board. **Dr. Stewart Smith** was elected first vice president.

Dr. Blair D. Erb, Jackson, recently addressed the Rotary Club.

Dr. C. Harold Steffee, Memphis, spoke recently before members of the Methodist Hospital Auxiliary.

Chattanooga physicians participating recently in radio or television programs over Chattanooga stations include: **Dr. Carl A. Hartung** who discussed "Arthritis and Rheumatism"; **Dr. Harry S. Anderson** whose subject was "Rheumatic Fever"; and **Dr. E. E. Reisman, Jr.** whose subject was "Carcinoma of the Breast."

Dr. Jesse Adams, Chattanooga, was a guest speaker at the Brainerd Kiwanis Club.

BOOK REVIEW

Atlas of Obstetric Technic. By J. Robert Willson, M.D., 301 pages. The C. V. Mosby Company, St. Louis, 1961. Price: Deluxe \$14.50, Regular \$12.50.

This is a 300 page atlas devoted exclusively to descriptions and illustrations of normal and abnormal obstetrical procedures as practiced in America today. The major portion is comprised of original illustrations and drawings which typically appear on the right sided pages with the legend appearing on the accompanying left pages. They are lucid and include the important steps involved in the procedure with an overall excellence seldom exceeded in a textbook of this type.

Included in the legend are details of management of complicated labors, indications and contraindications, anesthetic technic and postoperative care. Obsolete procedures are not included. This text is not recommended for medical students; its chief benefit will be to general practitioners, general surgeons and obstetrical residents who are faced with a difficult or unusual problem.

ANNOUNCEMENTS

Physicians Recently Licensed to Practice Medicine in Tennessee

Finchum, Robert N., Knoxville
 Fort, Wilkinson D., Richmond, Va.
 Howell, Marshall G., Jr., Chattanooga
 McCaslin, Dan L., Memphis
 McCullough, Billie S., Munford
 Renner, Omer C., Jr., Memphis
 Schmidt, Charles R., Wichita, Kan.
 Sexton, David H., Knoxville
 Simpson, Elbert F., Jr., Memphis
 Duncan, Malcolm P., Signal Mountain
 Sanger, Marilyn J., Oklahoma City, Okla.
 Powers, Douglas F., Nashville
 Emerson, Blanche S. S., Jackson
 Boyer, Philip A., Jr., Memphis
 Budd, Duane C., Johnson City
 Robinson, John E., Jr., Memphis
 Begneaud, Wallace P., Jr., New Orleans, La.
 Caldwell, Marvin G., Danvers, Mass.
 Miller, Joseph H., Memphis

American Goiter Association

The American Goiter Association will meet in the Warwick Hotel in Philadelphia, Pennsylvania, May 4-6, 1961.

Hale-McMillan Lecture

An invitation is extended to TSMA members to be present at the annual Hale-McMillan Lecture on Thursday, April 27, at 8:00 p.m. in the

Public Health Lecture Hall at Meharry Medical College in Nashville. One of America's leading surgeons will deliver the lecture. He is Dr. Oliver Cope, Associate Professor of Surgery at Harvard Medical School and Visiting Surgeon at the Massachusetts General Hospital. Doctor Cope's subject will be "Hyperparathyroidism: The Experience in the Diagnosis and Treatment of 245 Cases."

Postgraduate Day in Psychiatry Central State Hospital and Vanderbilt University School of Medicine

On Thursday, May 18, 1961, a one-day course will be given dealing with the role of the family physician in the care of the mental patient, with the methods of treatment within the hospital, and with some of the basic psychiatric problems involved in people becoming mentally ill and some of the problems involved in the patient's return to the community from a mental hospital. Clinical material will be presented.

The Academy of General Practice has approved the course for 7 hours of Category I credit.

Registration will be held in the lobby of the Hauk Building at Central State Hospital. Directions may be obtained from the Information Desk which is close by.

Tuition and luncheon by courtesy of the Central State Hospital.

Postgraduate Day in Radiology at Vanderbilt University School of Medicine

The Department of Radiology is offering a one-day course on Thursday, June 8, to be held at Vanderbilt University Hospital, beginning at 9 a.m., on the topic "Troubleshooting Your X-ray Problems." Subjects to be covered will include radiation safety, film processing problems, problems of specific interest to the orthopedist, and "troubleshooting" x-ray problems in neurosurgical conditions. Special consideration will be given x-ray problems dealing with the chest and gastrointestinal tract as well as pediatrics.

The course is approved for 7 hours of Category I credit by the American Academy of General Practice. Tuition is \$15.00, which includes the luncheon. For further information address the Department of Postgraduate Instruction, Vanderbilt University School of Medicine, Nashville.

Symposium on Hypertension Recent Development

On Thursday, May 4, Hahnemann Medical College and Hospital, Philadelphia, will hold its second 4-day conference on this subject. Many of the country's clinicians and investigators in this field will appear on the program. Further information may be obtained from Albert N. Brest, M.D., 230 No. Broad Street, Philadelphia 2.

PLACEMENT SERVICE

The Placement Service of the Tennessee State Medical Association is designed to assist doctors and communities to get together. Further information and contacts to both physicians and communities are available from the Public Service Office, 112 Louise Avenue, Nashville 5, Tennessee.

Locations Wanted

A 30 year old married surgeon desires to establish practice, either solo, clinical, associate or assistant, in Tennessee community of 15,000-25,000. Graduate of University of Tennessee. Protestant. Available July 1961. LW-335

A 26 year old married physician desires to establish clinical or group-type general practice in east Tennessee community of 5,000-25,000. Lutheran. Graduate Medical College of Virginia. Available immediately. LW-368

A 36 year old married physician desires private practice in general surgery in Tennessee community of 20,000-50,000. Will consider assistant or associate practice. Graduate University of Tennessee. Methodist. Four years residency, Tennessee license. Available immediately. LW-373

A 30 year old married physician desires to locate in east Tennessee community of 35,000-100,000 to establish practice in pathology. Will consider assistant or associate practice. Protestant. Graduate Jefferson Medical College of Philadelphia. Residency training. Available July 1961. LW-384

A 35 year old married physician wishes to locate in east of middle Tennessee community 8,000-10,000 in the practice of internal medicine. Will consider assistant, associate, or industrial. Protestant. Graduate University of Colorado. Residency training. Tennessee license. Available immediately. LW-390

A 28 year old married general practitioner desires to establish practice in east or middle Tennessee community of 30,000 or less. Will consider clinical, assistant or associate practice. Protestant. Graduate University of Tennessee. Residency with one year surgery, Tennessee license. Available July 1961. LW-392

A 37 year old married general practitioner with training in thoracic surgery would like to establish practice in east Tennessee community 30,000 or over. Will consider group, clinic, associate or institutional practice. Graduate Yale University. Catholic. Extensive residency training, License applied for. Available immediately. LW-402

A 31 year old married physician wishes to locate in west Tennessee community (will consider other localities) of 5,000 or over in the practice of general and thoracic surgery. Will consider clinical, industrial, or associate practice. Residency training, Tennessee license. Methodist. Graduate University of Tennessee. Available July 1961. LW-403

A 36 year old married physician would like to establish general 'family physician type' practice in Tennessee community of 1,500 or over. No preference as to locality. Presbyterian. Graduate of Tennessee. Tennessee license. Available July 1961. LW-404

A 31 year old married physician would like to establish general 'family type physician' practice in Tennessee community of 2,000 or over. Will consider any location in Tennessee. Baptist. Graduate of Tennessee. Tennessee license. Available October 1961. LW-405

Physicians Wanted

Physician in west Tennessee town of 500,000 desires an associate, ages 28-35, for internal medicine practice. Office space and some equipment provided. PW-126

Physician in east Tennessee town of 30,000 desires associate in general practice and some surgical training. Office space and some equipment provided. PW-127

Physician in large middle Tennessee town desires an associate general practitioner. Office space and equipment available. PW-130

West Tennessee town of 500,000 in need of an eye, ear, nose and throat specialist to take over office equipment on reasonable terms of physician who is deceased. PW-135

Small southern Tennessee community in need of a general practitioner to replace retired M.D. Hospital within 15 miles area. Near large industrial area. Large local trade area. Good location for interested physician. PW-142

Physician in middle Tennessee town of 200,000 desires associate or independent internish (or general practitioner). Office space and equipment provided. PW-146

Small southern Tennessee community of 1,200 with trade area of 20,000 needs general practitioner. Two other physicians in community. Excellent opportunity for young physician wishing to establish practice. Office space and housing readily available. PW-151

For immediate occupancy; office in choice location of large west Tennessee city. Completely equipped with diagnostic equipment, including x-ray department. Attractively and completely furnished, less than six months use. Adequate free parking for staff and patients. PW-152

Great need for physician in middle Tennessee community of 3,000 with either excellent salary, plus, or will allow physician to assume hospital by taking over notes remaining (no initial down payment); 6,500 population. Hospital completely staffed and equipped. Only physician in county now retired. Good location and financial opportunity. PW-159

Physician in middle Tennessee community of over 15,000 desires physician for practice in ob-gyn, either good salary plus percentage graduating into full partnership, or will consider associate practice with qualified physician. PW-160

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The Journal of the TENNESSEE STATE MEDICAL ASSOCIATION

DEVOTED TO THE INTERESTS OF THE MEDICAL PROFESSION OF TENNESSEE

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Instructions to Contributors

Manuscripts submitted for consideration for publication in the JOURNAL OF THE TENNESSEE STATE MEDICAL ASSOCIATION should be addressed to the Secretary-Editor, Dr. R. H. Kampmeier, Vanderbilt University Hospital, Nashville 4, Tennessee.

Manuscripts must be typewritten on one side of letter-weight paper. Either double or triple spacing and wide margins must be provided to facilitate editing which will be legible for the printer.

Bibliographic references should not exceed ten or twelve in number documenting key publications. They should appear at the end of the paper. The bibliographic references must conform to the style used in the American Medical Association publications, as, —Alais, F. G.: What Is Known About It, J. Tennessee M. A., 35:132, 1950.

Illustrations must be mounted on white cardboard and be numbered. The editor will determine the number, if any, of illustrations to be used. Additional illustrations will be charged to the author. The author's name should appear on the back of each illustration.

If reprints are desired, the requested number should be indicated in the letter accompanying the manuscript. The author will be billed by the publisher.

The authors review the increasing attention given to this syndrome. Its recognition for what it is is essential for proper management and evaluation of prognosis.

The Post-Myocardial Infarction Syndrome*

HERMAN J. KAPLAN, M.D., DANILO I. MAGTIRA, M.D., LAURENCE A. GROSSMAN, M.D., MILTON GROSSMAN, M.D., and FRED D. OWNBY, M.D.,
Nashville, Tenn.

In 1956, Dressler¹ observed that 3 to 4% of patients having had an acute myocardial infarction developed a complication characterized by a particular clinical picture which he termed the post-myocardial infarction syndrome. In 1959, he reported 53 cases. This entity consists of pericarditis, pleurisy and pneumonia, occurring singly or in any combination thereof, some time in the post-infarction period. It resembles idiopathic pericarditis and the post-cardiotomy syndrome. Two patients with this complication of myocardial infarction were seen by us within a period of seven months.

Case Reports

Case 1. A 30 year old white man entered St. Thomas Hospital on November 5, 1959, with sudden, severe, squeezing substernal pain of one hour's duration. The history was remarkable in that he had recurrent "indigestion" for a year. His father and a paternal uncle had coronary artery insufficiency.

The physical examination, aside from marked apprehension, disclosed normal findings. He was afebrile. The blood pressure was 124/70, and the pulse rate was 68.

Laboratory findings revealed the WBC. count to be 11,100 per cu. mm., the Hgb. 13.4 Gm. per 100 ml., the serum glutamic oxaloacetic transaminase 106 units, the cholesterol 332 mg., and the fasting blood sugar 105 mg. per 100 ml. There were no albuminuria, glycosuria or cellular elements in the urine. The electrocardiogram showed an acute myocardial infarction of the posterior wall.

The patient was treated with oxygen, meperidine hydrochloride (Demerol), phenobarbital and aluminum hydroxide. Anticoagulant therapy was not employed because of symptoms suggestive of

peptic ulcer. On the second day a loud, transient pericardial friction rub was heard. A portable chest X-ray disclosed a normal cardiac silhouette (Fig. 1). A maximum temperature rise to 101.4°

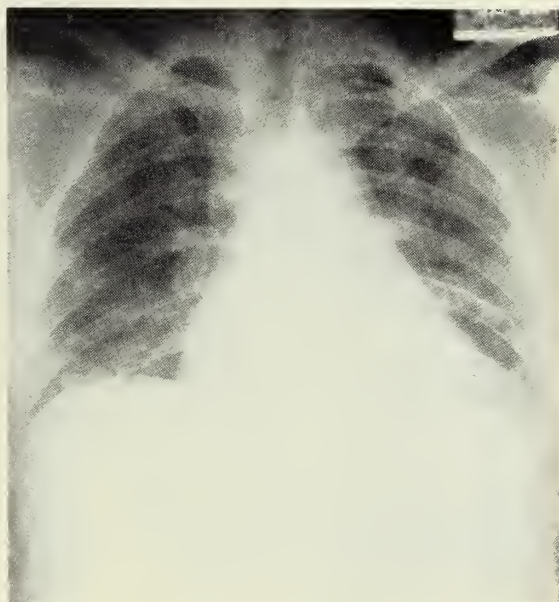


FIG. 1. (Case 1) Portable chest X-ray on the 3rd hospital day showing a normal cardiac silhouette and clear lung fields.

Fahrenheit occurred on the second day. Thereafter, his fever decreased by defervescence and he became afebrile on the 6th day. Until this time he had mild recurrent pleuritic anterior chest pain, radiating to either shoulder, and a nonproductive cough.

On the 12th day he again developed severe substernal pain, sweating and hypotension. The electrocardiogram revealed changes of an evolving posterior wall myocardial infarction with anterolateral extension. The WBC. count was 9,300 per cu. mm. Treatment with bishydroxycoumarin (Dicumarol) was started. For 3 days he had low grade fever and mild pleuritic chest pain. Subsequently, his course was not remarkable until the 25th hospital day (13 days follow-

*From the Medical Service, St. Thomas Hospital, Nashville, Tennessee.

ing extension of the infarct). A rise in temperature to 101.4° Fahrenheit ensued, and he again had severe pleuritic anterior chest pain which radiated to both shoulders and was intensified on swallowing and change of position. At no time was there any evidence of peripheral thrombophlebitis, paradoxical pulse or distention of the neck veins. There were tachycardia, distant heart sounds and moist rales at the lung bases. Electrocardiograms disclosed only the evolutionary changes of the myocardial infarction. Chest X-ray studies showed enlargement of the cardiac silhouette (Fig. 2) and minimal pleural effusion

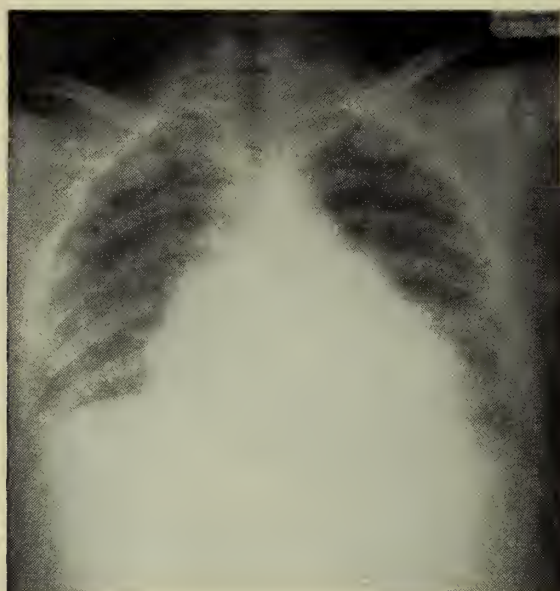


FIG. 2. (Case 1) Portable chest X-ray on the 28th hospital day showing marked enlargement of the cardiac silhouette.

on the left. The prothrombin time was 74% (15 seconds), the Hgb. 10 Gm., the PCV. 31%, the serum glutamic oxaloacetic transaminase 36 units. Febrile agglutinins showed no elevation in titer. Cultures of the urine and blood were sterile. By the 29th day there was no improvement despite treatment with salicylates, narcotics, digitalis and chloramphenicol. The bishydroxycoumarin (Dicumarol) was stopped, and prednisone was started (40 mg. daily). Overnight he became free of symptoms. A gradual reduction in heart size followed (Fig. 3). Prednisone was gradually decreased in dosage and discontinued after 2 weeks. He was discharged on the 37th hospital day.

One month after discharge, he again developed similar symptoms which responded to short-term prednisone therapy.

Case 2. A 44 year old white man was hospitalized on June 8, 1960. Two days prior to admission he had had sudden, severe anterior chest pain radiating to both arms. The pain subsided after 30 minutes, but he continued to feel poorly. He had had evidence of coronary artery insufficiency several years previously.

The physical examination revealed a tall, muscular man in no acute distress. The blood pres-

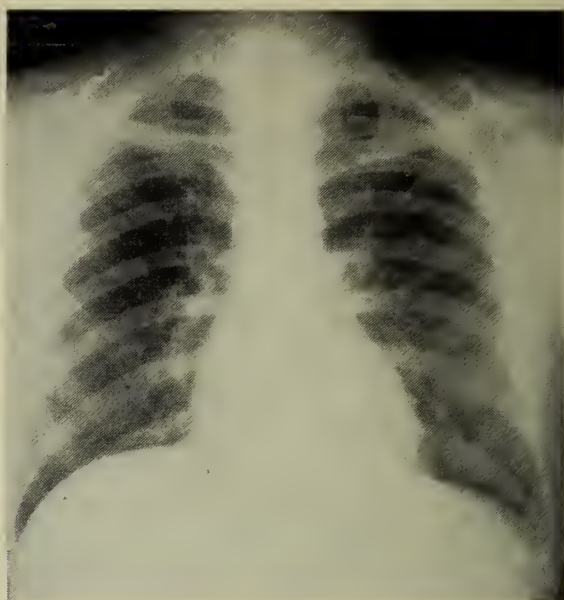


FIG. 3. (Case 1) Routine chest X-ray on the 36th hospital day showing a normal cardiac silhouette and clear lung fields.

sure was 140/80, the pulse rate 72, the temperature 98.4° Fahrenheit. No abnormal findings were noted.

Laboratory data revealed the WBC. count to be 17,250 per cu. mm., the Hgb. 16.2 Gm., the PCV. 48%, the blood sugar 80 mg. per 100 ml., and the serum glutamic oxaloacetic transaminase 61 units, rising to 130 units the next day. The urinalysis was negative. The electrocardiogram showed an acute infarction involving the inferior apical wall.

The patient was started on warfarin sodium (Coumadin). On the 2nd day (3 days following the onset of symptoms), he developed severe pain in the anterior chest, intensified by inspiration, swallowing and change of position. The prothrombin time was 26% (19.5 seconds). On the 3rd hospital day a transient pericardial friction rub was heard, and the warfarin sodium (Coumadin) was stopped. The temperature rose to 101.6° Fahrenheit. The WBC. count was 23,900 per cu. mm. Electrocardiograms disclosed evolutionary changes of the infarction. The chest x-ray film showed the heart to be of normal size. There was no evidence of peripheral thrombophlebitis. The administration of salicylates, narcotics, sedatives and oxygen was ineffective in control of symptoms. After 2 days of severe pain, prednisone was started (40 mg. daily). Prompt relief of symptoms followed, and the prednisone was discontinued after 9 days. He was discharged on the 31st hospital day. There has been no recurrence of pain.

Comment. The first patient developed severe pleuropericardial pain and fever twelve days after the extension of his myocardial infarction. There was marked enlargement of the cardiac silhouette, sug-

gesting pericardial effusion. Signs of peripheral thrombophlebitis were not demonstrable. No electrocardiographic (Fig. 4) or

prompt disappearance of symptoms with the initiation of steroid therapy.

Discussion

The course of these patients depicts the post-myocardial infarction syndrome described by Dressler (Table 1). Pericarditis

Table 1

MAJOR MANIFESTATIONS OF THE POST-MYOCARDIAL INFARCTION SYNDROME

1. Pleuropericardial pain—most impressive symptom.
2. Fever (up to 102°)—often present.
3. Evidence of pericarditis—78%.
 - a) Pericardial friction rub—often heard.
 - b) Pericardial effusion (serous or hemorrhagic)—62%.
 - c) Electrocardiographic evidence of pericarditis—50%.
4. Pleurisy with effusion (serous or hemorrhagic)—62%.
5. Pneumonia—28%.
6. Anemia—may be present.
7. White blood cell count—10,000-20,000/cu. mm.
8. Serum transaminase—usually normal.

in acute myocardial infarction is a relatively insignificant event. In the post-myocardial infarction syndrome it is a major and impressive complication and the most common manifestation of the triad (78% in Dressler's experience). It has certain characteristic features. The pericardial friction rub is present usually in the second to eleventh week of illness and may last from three days to eleven weeks. It occurs more frequently in this syndrome than in acute myocardial infarction, where it is heard on the second to fourth day. There is frequently a pericardial effusion (62%), which may be serous or hemorrhagic. It has no relationship to anticoagulant therapy, but the use of anticoagulants is contraindicated. Serial x-ray studies are of prime importance in making this diagnosis. The electrocardiogram shows evidence of pericarditis in about one-half of the cases.

Pleurisy with effusion is also commonly found in this clinical entity (68%). It may be unilateral or bilateral, serous or hemorrhagic. It occurs in the absence of congestive heart failure or pulmonary infarction.

Pneumonia is less frequent than pericarditis or pleurisy (28%). The pulmonary infiltrates are located predominantly in the lower lobes. There may be hemoptysis. Bacteriologic studies are nonrevealing, and the use of antibiotics is not beneficial. The pathologic findings are nonspecific. Weiser, Kantor and Russell² reported a patient with

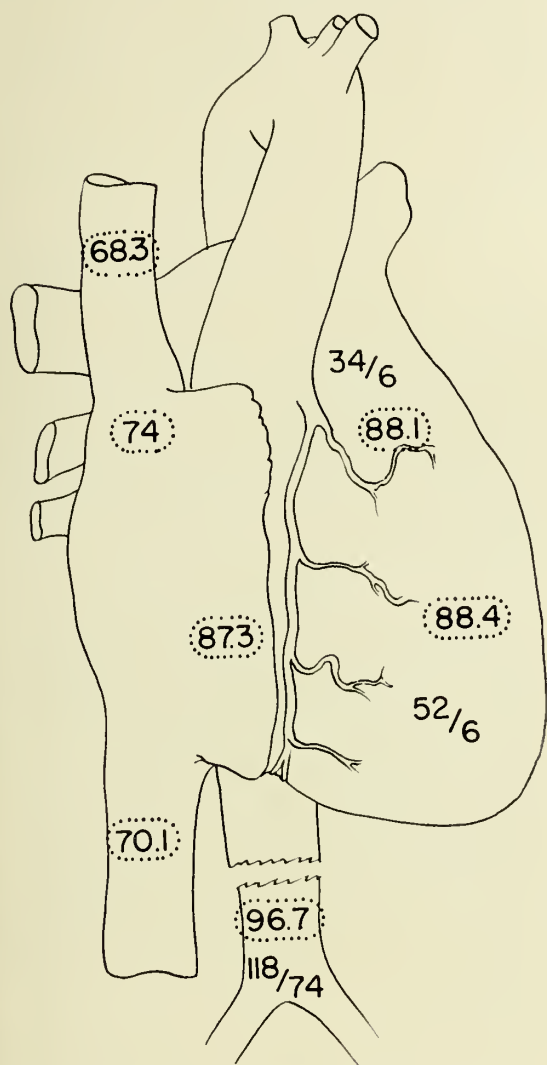


FIG. 4. (Case 1) Serial electrocardiographic tracings showing an acute myocardial infarction of the posterior wall, its evolutionary changes, extension of the infarction to the anterolateral wall on the 13th hospital day and further evolutionary changes.

laboratory evidence for further extension of the myocardial infarction was noted. The prothrombin time was not significantly prolonged. A distinct drop in the hemoglobin occurred. Bacteriologic studies were negative. There was no favorable response to the administration of antibiotics. With prednisone, he recovered, but then had a recurrence of symptoms. Again he responded well to prednisone. The second patient developed similar symptoms three days after acute myocardial infarction. Supportive measures were ineffective, but there was

the post-myocardial infarction syndrome who had substernal pain, a pericardial friction rub, profuse persistent hemoptysis and progressive massive consolidation of both lungs. The clinical diagnosis was that of pulmonary infarction and he was treated with anticoagulants, but expired. Autopsy revealed fibrinous adhesions between the visceral and parietal pericardium (this was four days after the friction rub was heard). In the lungs, the "microscopic picture resembled that seen in atypical viral pneumonia." An alveolar hyaline membrane, fibrinoid necrosis of the alveolar walls and an accumulation of mononuclear cellular exudate in the alveoli were noted. There were no pulmonary emboli and no source for them was demonstrable. (The cardiac findings revealed thrombi in the right coronary and left circumflex coronary arteries, necrosis and fibrosis of the myocardium, and aneurysmal dilatation at the apex of the left ventricle.)

Clinically the most impressive symptom of the complicating pleuropericarditis is pain, which often precedes the onset of fever. The pain may be variable in its characteristics. It may resemble that of myocardial or pulmonary infarction. It has been described as pressing, squeezing, tightening, sharp, stabbing, radiating to the shoulders, neck, jaws, and epigastrium. It is worse on breathing, yawning and swallowing. The fever does not exceed 102 degrees Fahrenheit and may be prolonged.

The laboratory data reveal a white blood cell count of between 10,000 and 20,000 per cubic millimeter. The serum transaminase is often normal. Bacteriologic studies are negative. There may be anemia.

Symptoms usually last one to two weeks, though the disease is self-limited, recurrences are common. In the milder forms treatment with salicylates and narcotics suffices. In more severe cases steroids are almost specific, bringing about immediate improvement. The incidence of recurrence is

greater when steroids are employed. Anticoagulant drugs are contraindicated.

The etiology is unknown. There is no relationship to the size or the location of the infarct. Dressler postulates a hypersensitivity reaction to antibodies as a result of trauma of the infarct. Davies and Gery³ state they demonstrated the presence of circulating auto-antibodies to heart antigen.

Important points to remember are:

1. The post-myocardial infarction syndrome should not be confused with pulmonary infarction or extension of the myocardial infarction.

2. Anticoagulants are dangerous and their use is contraindicated.

3. Although deaths have been reported,⁴ in general, the post-myocardial infarction syndrome is a benign process and entails a good prognosis.

Summary

Two patients who developed the post-myocardial infarction syndrome are described. This complication of myocardial infarction consists of pericarditis, pleurisy and pneumonia, occurring singly or in any combination, some time in the post-infarction period. It resembles idiopathic pericarditis and the post-cardiotomy syndrome. It should not be confused with pulmonary infarction or extension of the myocardial infarction. Anticoagulant therapy is contraindicated.

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The congenital anomalies in this category are amenable to open heart surgery at a small risk in mortality. Cases must be chosen after study by cardiac catheterization. The authors recommend that the operation be undertaken, even on a prophylactic basis, in the absence of symptoms and signs and the known fact that some patients may remain asymptomatic during a long life.

Surgical Closure of Atrial Septal Defects*

HAROLD A. COLLINS, M.D., J. KENNETH JACOBS, M.D., and H. WILLIAM SCOTT, JR., M.D., Nashville, Tenn.

Defects of the atrial septum are among the most common congenital cardiac anomalies and represent the most frequently encountered congenital malformations of the heart in adults. In many infants and children with large atrial septal defects, normal development and growth occur and few symptoms are apparent. A smaller number of infants, usually during the first year of life, succumb from the effects of pneumonia, cardiac arrhythmia or congestive heart failure. This wide discrepancy in clinical manifestations is probably due in part to the presence of associated defects, size and location of the atrial septal defect, and the occurrence of anomalous pulmonary veins. Of particular importance are occasional abnormalities or defects of the mitral and tricuspid valves encountered in association with defects of the atrial septum.

Classification

Although wide variation exists in clinical manifestations, atrial defects can be classified into broad general categories based upon anatomic and embryologic considerations. Such a classification is important to an understanding of the problems involved in diagnosis, prognosis and surgical treatment. In general, four types of interatrial communication are recognized: a slit-like patency of the foramen ovale, a persistent ostium secundum, a persistent ostium primum and the complete atrioventricularis communis defect.

In the human embryo the first septum to form, or septum primum, usually develops

during the fifth week of intrauterine life from the cephalic portion of the primitive atrium. Growth proceeds caudally toward the simultaneously developing interventricular septum. The passage below the free margin of the septum primum forms the ostium primum of the interatrial septum. During the sixth week the cephalic portion of the septum primum breaks down to form the ostium secundum and the lower margin of the septum primum unites with the superior margin of the interventricular septum, thus obliterating the ostium primum. The second septum, septum secundum, appears during the sixth week as a fold on the cephalic wall of the atrium and grows caudally, gradually overlapping the ostium secundum of the septum primum. The central portion of the septum secundum ceases to grow after overlapping the ostium secundum leaving an oval aperture (foramen ovale) opposite the opening of the inferior vena cava into the right atrium.

The rather complex development of the interatrial septum can obviously give rise to varied types of communications between the two atria if an embryologic mishap occurs. In many instances a persistent foramen ovale may persist throughout life without producing significant symptoms and is a frequent incidental finding at postmortem examination. In contrast to this true defects of the atrial septum are produced by an actual failure of growth of the atrial septum. It is thus possible to have a persistent ostium secundum defect usually located in the mid portion of the septum or an ostium primum defect in which the lower edge of the defect is formed by the annulus of the atrioventricular valves. The more complex atrioventricularis communis defect includes any low atrial defect in which evidence of

*From the Department of Surgery, Vanderbilt University Medical Center, Nashville, Tenn.

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maldevelopment of the endocardial cushions is present, such as a cleft in the mitral or tricuspid valves with or without a ventricular septal defect. The most common true defect of the atrial septum is the ostium secundum and is the type of defect to which the following discussion will be devoted.

The ostium secundum defect usually occurs in the midportion of the atrial septum and varies from one to four centimeters in diameter. Occasionally the opening may be located superiorly near the entrance of the superior vena cava. When this is the case, anomalous drainage of one or both right pulmonary veins into the right atrium or superior vena cava is common. At operation or postmortem examination the heart with a persistent ostium secundum defect generally appears large. The right atrium and great veins are distended and the right ventricle appears hypertrophied due to the large volume of the left to right shunt. The pulmonary artery is almost invariably larger than the aorta, sometimes to a striking degree.

In its characteristic form the ostium secundum type of atrial defect is readily diagnosed clinically. Typically, cyanosis is not evident since the shunt is from left to right. Because of the variable and sometimes unimpressive auscultatory phenomena, the abnormality frequently is not recognized. While the murmur is rarely absent, it occasionally does not appear until the third or fourth year of life. The characteristic systolic murmur, due to a relative pulmonary stenosis, is grade II to III and sharply localized along the left sternal border in the first three interspaces. A mid-diastolic murmur is occasionally audible near the tricuspid area. Although apical diastolic murmurs in association with an atrial septal defect are frequently ascribed to rheumatic mitral stenosis, Lutembacher's syndrome, the murmur is probably due to rapid inflow from the right atrium to the right ventricle during diastole.⁸ The second sound in the pulmonic area is usually accentuated and widely split.

Right atrial, right ventricular and pulmonary arterial enlargement can be demonstrated roentgenographically. The aortic knob is small and unimpressive. The pulmonary vascular markings are accentuated

resulting in the appearance of hypervascular lung fields (pulmonary plethora). Fluoroscopically the so-called "hilar dance" may be evident. Angiocardiography is rarely necessary but the shunt may be visualized if injection of contrast material into the pulmonary artery or left atrium is accomplished.

The electrocardiogram reveals right axis deviation in the standard leads, evidence of right ventricular hypertrophy in the precordial leads, a lengthened P-R interval, and incomplete bundle branch block. Left axis deviation is almost never seen and its presence is suggestive of a coexistent anomaly.

Surgical Procedures for Repair

Within the past 15 years many technics have been proposed for the surgical closure of defects of the atrial septum. The proposed technics included closure of defects by, (1) the closed and (2) the open methods. Numerous extremely ingenious adaptations of the closed method of approach were used with success,^{1, 4, 5, 10} but most investigators now consider exposure of the atrial septum to direct vision essential for satisfactory closure of the defects. This may be accomplished clinically by the artificial induction of general body hypothermia, primarily to prevent damage to the central nervous system during the brief period of temporary circulatory arrest necessary to expose and close the septal defect. The rather severe time restriction inherent with this method and inability to cope with associated complex cardiac anomalies during hypothermia are stringent limitations. The most expedient method of closing defects of the atrial septum under direct vision involves temporary interruption of the caval inflow and provision of circulation by an artificial heart lung machine. This technic of direct vision closure has obvious advantages over closed methods and provides time for unhurried anatomical closure of defects. In addition unexpected more complex intracardiac anomalies may be corrected at the same operation. This report details the experience at Vanderbilt University Medical Center with the closure of atrial septal defects in 20 patients using the artificial heart lung machine for temporary cardiopulmonary bypass.

Materials and Methods

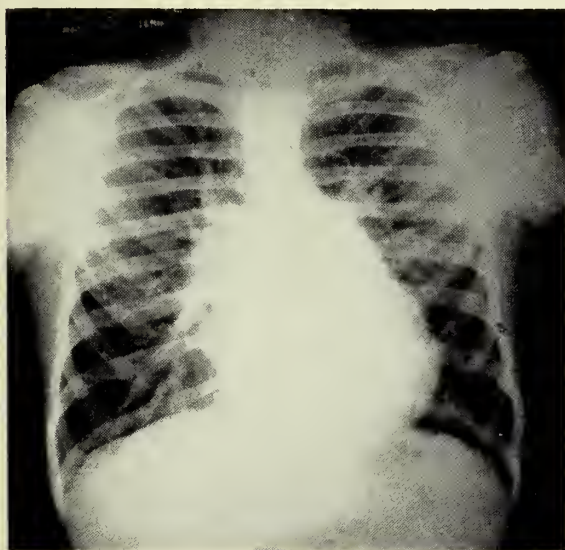
During the past three years 20 patients with ostium secundum defects of the atrial septum have been submitted to operation. Six of this group were males and 14 were females. The patient with a defect of the atrial septum frequently has a rather thin gracile body habitus and this observation was confirmed in this series. Ages of the patients at the time of operative closure of the defect varied from 17 months to 48 years with an average age of 15 years.

Seven patients required digitalis therapy for mild to severe cardiac failure. Other clinical manifestations included tachycardia, palpitation and mild exertional dyspnea in 3 patients and poor growth with frequent upper respiratory infections in 3 children. Six patients were essentially asymptomatic and presented only objective evidence of an atrial septal defect. The roentgenograms of most patients demonstrated hypervascularity of the lungs with some enlargement of the pulmonary artery (Fig. 1-A). Cardiac

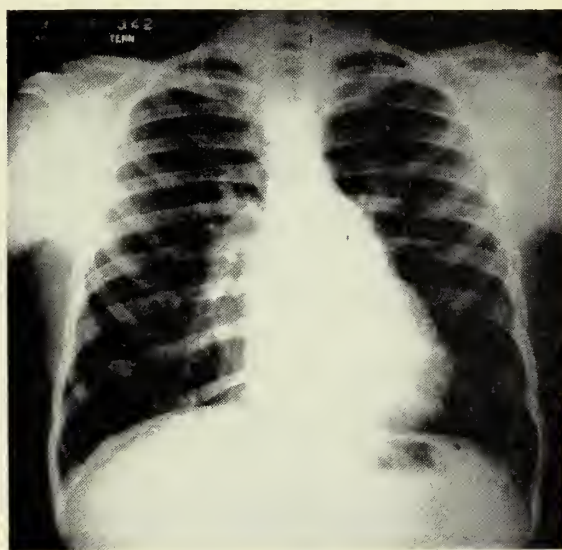
tients the right ventricular pressure was significantly higher than the pulmonary arterial pressure, probably reflecting hypertrophy of the right ventricular outflow in each patient. No patient in whom the shunt was predominantly right to left was subjected to operation. The ratio of pulmonary blood flow to systemic blood flow varied from 2:1 to 6:1.

The details of operative technic have become fairly well standardized in recent cases (Fig. 3). In initial operations thoracotomy was performed through a transverse incision with division of the sternum and entry into both pleural spaces. In more recent experience a vertical sternum splitting incision has been used for all patients. Exposure with this incision has always been adequate and postoperative respiratory complications appear to be fewer. We have had no difficulty in the management of other associated cardiac anomalies with the use of this incision.

The initial operations in this series were



A.



B.

FIG. 1. A. Roentgenogram of chest in a patient with an ostium secundum type of atrial septal defect. Slight cardiac enlargement, prominence of the main pulmonary arterial segment, and hypervascular lung fields are apparent.

B. Chest roentgenogram of same patient following closure of atrial septal defect. Reduction in size of cardiac silhouette and decrease in pulmonary vascular markings have occurred.

enlargement was a more variable finding. In all but 2 patients the electrocardiogram manifested evidence of right ventricular hypertrophy and strain.

Preoperative cardiac catheterization was performed in each patient. Typical findings from a patient with an ostium secundum defect are illustrated in Fig. 2. In several pa-

performed with the aid of a vertical screen type of pump oxygenator; in later cases a disc oxygenator has been used. The disc oxygenator has the advantages of greater simplicity and lesser demands for blood. Extracorporeal circulation has been accomplished in standardized fashion throughout the series. Caval inflow was diverted by

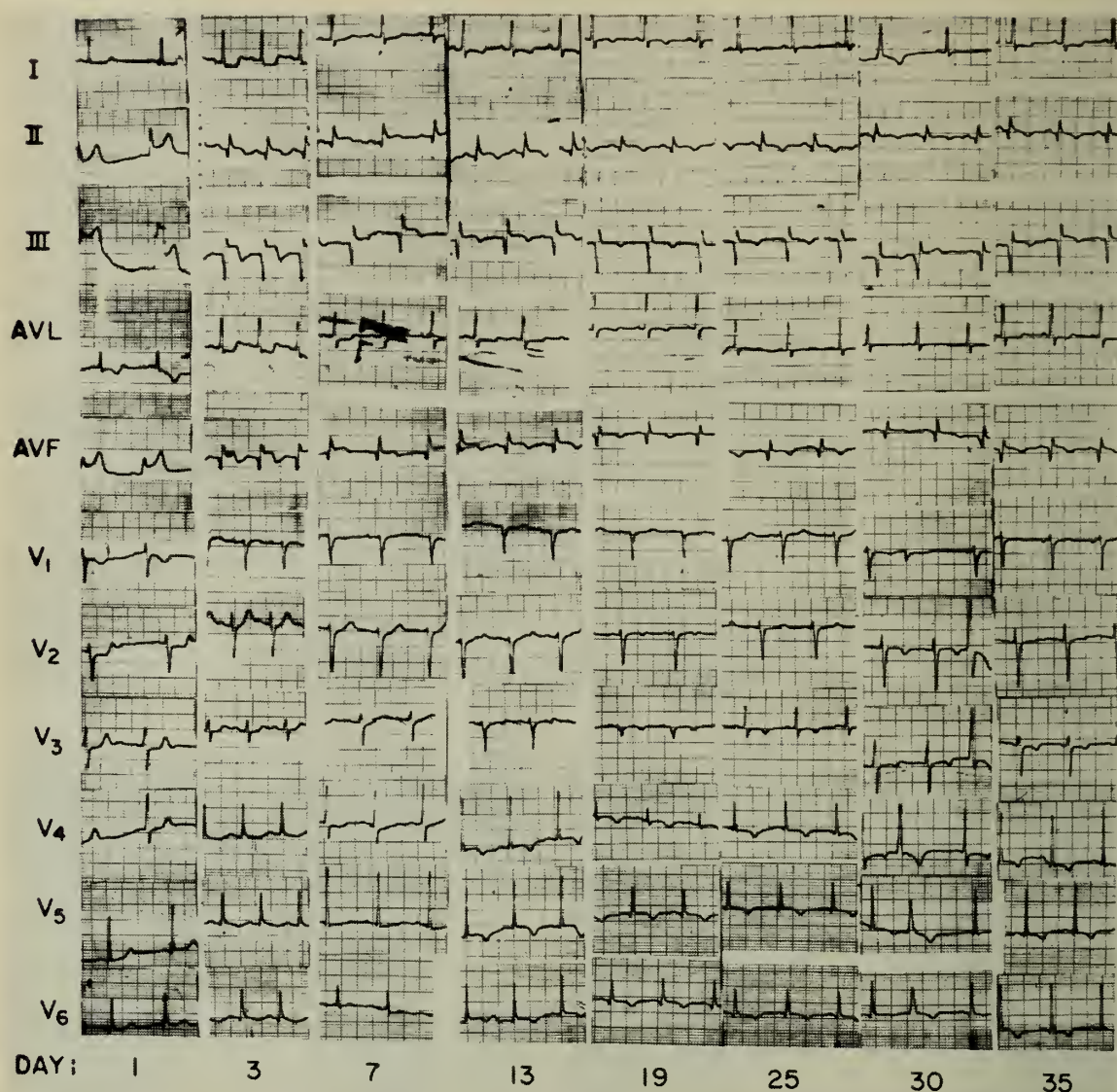


FIG. 2. Diagram of typical findings by cardiac catheterization in a patient with an atrial septal defect. Figures within the stippled ovals indicate oxygen saturation and other figures are pressures in mm. Hg. The most notable findings are the striking increase in oxygen saturation in the right atrium due to the left to right shunt and slight right ventricular hypertension.

gravity drainage into the oxygenator through separate catheters in the superior and inferior venae cavae. Oxygenated blood was returned to the arterial system through the right common femoral artery at flow rates approximately 2200 to 2400 milliliters per minute per square meter of body surface area. Flow rates of this magnitude usually maintained a relatively normal systemic arterial pressure and prevented the development of significant metabolic acidosis. The duration of extracorporeal circulation varied from 7 to 47 minutes with an average of 15 minutes.

Although some variation existed in the

location of the ostium secundum defect, most were located in the midportion of the atrial septum. In 5 patients the atrial septal defect was complicated by the presence of one or more of the right pulmonary veins draining into the right atrium. The size of the defect usually varied from 3 to 4 centimeters in diameter. Closure of the defect was accomplished by two continuous fine silk sutures. On three occasions, either because of the large size of the defect or deficient surrounding tissue, a prosthetic patch was used for closure of the defect. In instances of pulmonary veins draining anomalously into the right atrium, the septal

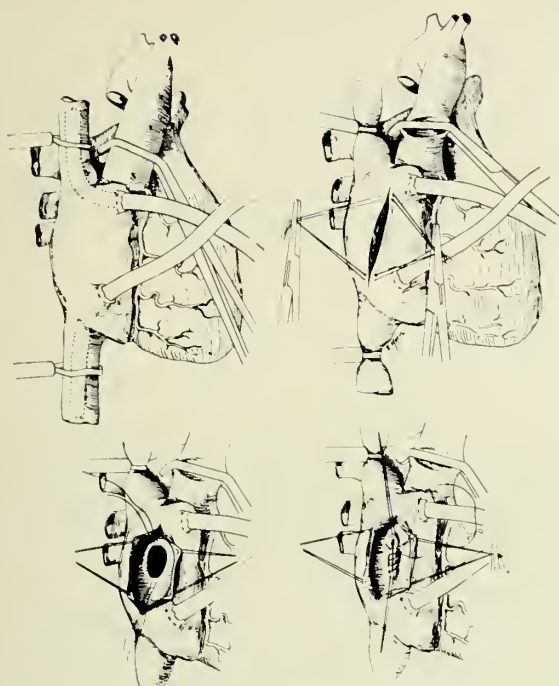


FIG. 3. Steps in the closure of an ostium secundum atrial septal defect. In the left upper illustration individual catheters have been inserted into the superior and inferior venae cavae for gravity drainage of the venous return. In the right upper illustration tape tourniquets have been tightened about the caval catheters and the right atrium opened. During closure of the defect, intermittent occlusion of the ascending aorta is performed to diminish coronary blood flow. Lower illustrations depict rather typical ostium secundum defect being closed with two continuous non-absorbable sutures. Following closure of the defect the clamp is removed from the aorta and the right atrial incision is closed.

closure was advanced anterior to the pulmonary veins thus facilitating pulmonary venous inflow directly into the left atrium.

The postoperative course in most patients was relatively uneventful. The most significant complications were the development of persistent atrioventricular block in an infant and the recurrence of the septal defect in a 24 year old woman. The recurrent defect was confirmed by cardiac catheterization. Closure of the defect was accomplished at a second operation a year later and the patient has continued to do well. The only death occurred in a 29 year old woman as a result of unrecognized postoperative bleeding and should have been preventable.

Discussion

Selection of patients for closure of atrial septal defects requires an understanding of the basic hemodynamic derangement—a left to right shunt. Normally the pulmonary

and systemic blood flows are equal in the absence of a communication between the two systems. The pulmonary arterial pressure is roughly one-fourth the systemic blood pressure and the pulmonary vascular resistance is likewise lower than the systemic resistance. In the presence of a communication between the two systems it is obvious that blood flows from left to right—from the systemic to the pulmonary system.

The pulmonary arterial pressure may or may not be elevated in the presence of a left to right shunt. Since the pulmonary arterial pressure is related to the product of flow and resistance, elevation of the pulmonary arterial pressure may be due to increased pulmonary resistance or a large pulmonary flow. Initially, pulmonary hypertension is a reflection of increased pulmonary blood flow in association with a large left to right shunt. In time changes may develop in the smaller pulmonary vessels causing an elevation of pulmonary resistance and a reduction in pulmonary flow. If these changes in the pulmonary vessels continue, eventually the pulmonary resistance may equal or exceed the systemic resistance resulting in a decreased pulmonary flow. This is then accompanied by a right to left shunt and peripheral cyanosis may become evident. Such serial changes have been documented by Dexter³ in several patients with defects of the atrial septum.

When the pulmonary resistance equals or exceeds the systemic resistance, operative closure of the communication places a larger burden on the pulmonary circulation and death from right side heart failure usually supervenes. Obviously it is of paramount importance to close the communication before irreversible changes occur in the pulmonary vasculature. The importance of this concept was recently emphasized by Liddle and associates⁶ in a series of 15 patients with pulmonary hypertension secondary to an atrial septal defect. Five of the patients died and only 6 derived significant benefit from the operation.

While defects of the atrial septum may be well tolerated in childhood and early adulthood right side heart failure becomes increasingly frequent after the third decade. Roesler⁹ found the average age at death to be 34 years in a series of patients with atrial

septal defects, most succumbing to cardiac failure. Although cardiac failure under these circumstances may be controlled by medical measures, it is of ominous portent insofar as surgical closure is contemplated. A mortality rate of 20% has been reported for patients over the age of 25 in whom closure of an atrial septal defect was performed.²

In our opinion the possible complications resulting from an atrial septal defect may be so severe or frequent that "prophylactic" operation is justified in the absence of symptoms or signs of cardiac decompensation.⁷ To justify such a viewpoint it is of importance that the surgical morbidity and mortality be appropriately low. This situation is analogous to the surgical management of patent ductus arteriosus. While closure of an atrial septal defect is somewhat more complex than closure of a patent ductus the incidence of surgical complications is similar. In view of this fact we have not hesitated to recommend closure of atrial septal defects accompanied by significant left to right shunts in asymptomatic patients.

Summary

The most common type of atrial septal defect, the persistent ostium secundum, is the most frequently encountered congenital cardiac lesion in adults. While the lesion may be well tolerated during infancy and childhood significant disability and death may occur in adulthood. Many ingenious techniques have been introduced for the closure of atrial septal defects but the most satisfactory has been closure under direct vision utilizing a pump oxygenator for tem-

porary cardiopulmonary bypass. This surgical technic was utilized in a series of 20 patients with few major complications and only one death. The low surgical morbidity and mortality justify the "prophylactic" closure of atrial septal defects to prevent the development of frequent and severe complications.

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Symptoms and Signs in Prognosis of Gastroduodenal Ulcers—D. D. Kozoll and K. A. Meyer, *Arch. Surg.*—Vol. 82-528 (April) 1961.

In cases of gastroduodenal ulcer the following symptoms and signs offered a *favorable* prognosis: a history of perforation of less than 6 hours without antecedent ulcer complications, normal nutritional state, a scaphoid abdomen, generalized tenderness with rigidity and rebound phenomena, and absent or hypoactive bowel sounds. These patients had the lowest morbidity and mortality. The symptoms and signs offering an *adverse*

prognosis were: perforation of more than 12 hours, elevated or subnormal temperature, perspiration, poor oral hygiene, or repeated emesis. These patients were salvageable, although there was a greater than average mortality. These symptoms and signs offered a *grave* prognosis: hemorrhage with perforation, temperature in excess of 102° F. (39° C.), pulse in excess of 120, respiration in excess of 40 per minute, blood pressure below 80 mm. Hg, pallor, malnutrition, obesity, distention, rales, cardiac enlargement, and severe pulmonary emphysema.

Here is a description of the results with a new form of oral penicillin. More observations will be needed to give it a firm place in therapeutics.

Phenethicillin (Oral Penicillin) in Post-Surgical and General Infections

EDWARD D. SNYDER, M.D.,* Memphis, Tenn.

After the advent of penicillin for wide medical use following the years of World War II, the remarkable effectiveness of this antibiotic became as familiar to the school child as to the medical profession. Not always known to the laity, however, was the growing incidence of serious and sometimes life-threatening sensitivity reactions to the intramuscularly-administered compound. Nonetheless, because the drug continued to be, from various vantage points, the best antibiotic of all, persistent efforts continued among pharmaceutical researchers to develop effective oral penicillins. The magnitude and incidence of toxic reactions were expected to be appreciably reduced via the oral route.

Oral penicillins were available before the introduction of potassium phenethicillin,† the drug reported here. But early oral forms, though unquestionably useful, failed to win full confidence of the medical profession, because of inconsistent results due to undependable blood levels. Parenteral penicillin continued in wide use because prompt, dependable, and high levels in blood and tissue could be consistently counted upon. This still holds true, but oral phenethicillin likewise produces exceptionally high peak serum levels, superior to those produced by penicillin V. In conjunction with intramuscular penicillin G, or without it, the physician giving phenethicillin orally is therefore assured of achieving penicillin blood levels equal to or better than those obtained with intramuscular penicillin G. Thus, the practitioner may today choose to eliminate parenteral peni-

cillin from his regimens without denying his patients the benefits of this antibiotic.

Serum levels reported with oral phenethicillin are directly proportional to the dosage given (Fig. 1). This control over

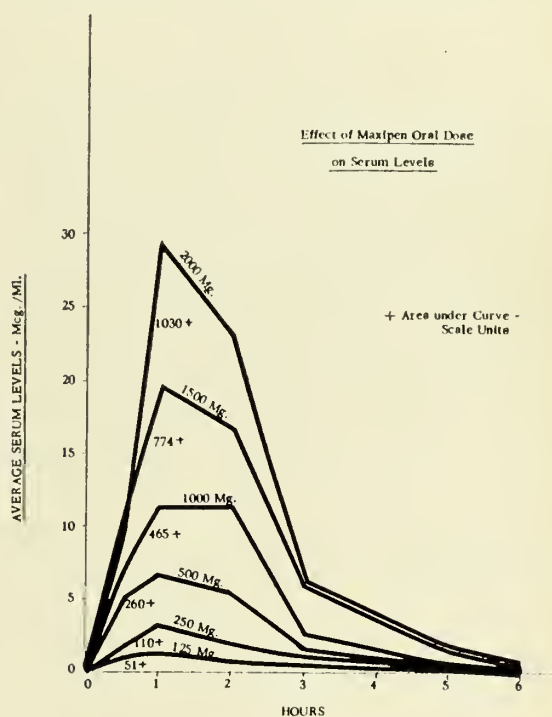


FIG. 1.

Adapted from Unpublished Data. (Report from Research Division, Chas. Pfizer & Co., Inc., to Medical Department, J. B. Roerig and Company.)

blood levels with oral penicillin by giving "tailored dosages" is of considerable advantage. In everyday use, in other words, this means the doctor may provide a "loading dose" of penicillin intramuscularly if he elects to, and then sustain these same high serum and tissue levels throughout the course of therapy by giving dosages of oral phenethicillin designed to meet the individual situation. Or, depending on the particular patient, the physician may omit the intramuscular penicillin and both start out

*From the Department of Surgery, Methodist Hospital, Memphis, Tenn.

†MAXIPEN. Product of J. B. Roerig and Company, Div., Chas. Pfizer & Co., Inc.

and continue with oral phenethicillin. Both courses were tried in the present study.

As with all new drugs, or improved forms of old drugs, clinical reports have served the purpose of familiarizing other practitioners with procedures and expectations. In addition to its successful use in general and mixed infections, phenethicillin has been shown effective in gonococcal urethritis,¹ gonorrhea,² primary and secondary syphilis,³ subacute bacterial endocarditis, bronchial pneumonia,⁴ skin,⁵ and otorhinolaryngologic⁶⁻⁸ infections. I began by treating postoperative wound infections with phenethicillin, and then extended the study to include urinary tract and other infections.

Methods and Materials

There were 88 patients, 50 males and 28 females, treated with oral penicillin (Phenethicillin) in this series. The ages represented spanned from 1 to 81 years. Some persons were seen on the surgical service of an urban hospital, while others were treated in a private practice temporarily assumed during a colleague's absence.

Generally, five categories of infection were encountered (Table 1): (1) postopera-

Table 1

EFFECTIVENESS OF MAXIPEN IN VARIOUS KINDS OF INFECTION

Postoperative		Effective 8
Wound Infections	12	
Skin and Soft		Effective 32
Tissue Infections	34	
Respiratory		Effective 25
Infections	26	
Urinary Tract		Effective 8
Infections	10	
Miscellaneous	6	Effective 6
Totals	88	Effective 79 (81 per cent)

tive wounds, (2) skin and soft tissue, (3) respiratory tract, (4) urinary tract, and (5) of miscellaneous nature. Within each general category were a variety of diseases. The typical lesion in category (1) was a wound infection following a radical mastectomy; in (2), an axillary folliculitis; in (3), bronchial pneumonia; in (4), pyelonephritis; and, in (5), prophylaxis following a dog-bite.

In all but 19 infections, cultures were prepared and testing by the disc-method was done to determine whether or not the organism was resistant or susceptible to vari-

ous antimicrobial substances. Testing for susceptibility was done with penicillin, streptomycin, tetracycline, erythromycin, triacetyloleandomycin, novobiocin, chloramphenicol, and sulfonamides.

Pathogens isolated included hemolytic *Staph. aureus*, coagulase positive, *Str. pyogenes*, *E. coli*, Vincent's organisms, pneumococci, gram-negative intracellular diplococci, *Str. vididans*, *Str. faecalis*, *Staph. albus*, and mixed pathogens.

Dosages of oral penicillin were individualized in conformance with the age of the patient and the severity of the infection. Forty-eight patients were given phenethicillin 500 mg. q.i.d. Medication for the balance of the patients varied between 250 mg. q.i.d. to 125 mg. b.i.d. to 500 mg. q. 6 h. to 250 mg. q. 6 h. Duration of treatment with oral phenethicillin ranged from 3 up to 17 days, but most patients were given the medication for from 4 to 6 days.

In 26 instances, a loading dose of 600,000 units of intramuscular penicillin was given at the outset, and in one case, 300,000 units. In other instances, patients had failed to respond to prior antibiotic treatment with chloramphenicol, V penicillin, or sulfamethoxypyridazine. Concurrently, depending on the nature and site of infection, some patients were given, as needed, morphine, hot soaks, saline gargles, an expectorant, an antitussive, a vinegar douche, inhalation therapy, rinses to restore the pH of the skin, or an antibiotic ointment. It will be recalled that some of these patients were hospitalized, but most were ambulatory outpatients.

The course of all persons was carefully followed. Frequent temperature readings were made. In 7 patients, hematologic studies (white blood cell counts) were done before and after penicillin therapy. As with all patients receiving penicillin or any other antibiotic, precautions against side effects and sensitivity reactions were taken.

Results

Results in clear cut infections are not difficult to evaluate. Remission of usual signs of infections, including return of temperature to normal, were the criteria used.

Therapy given, of which oral dosage of penicillin (phenethicillin) was the cornerstone, successfully controlled the variety of

infections in 79 of the 88 patients (81%). Clinical failures occurred in 9 cases.

In the 69 disc-susceptibility studies performed, the pathogens proved sensitive to penicillin in all but 7 instances. Five of the therapeutic failures occurred in the 7 patients whose cultures were resistant to penicillin. Contrariwise, clinical success was obtained in 2 cases in which the cultures were found to be resistant *in vitro* to penicillin.

No serious side reactions to orally administered penicillin occurred in this particular test series of patients. None had been known to be sensitive to intramuscular penicillin on prior occasions. Mild to moderate side effects were seen in 11 patients, necessitating cessation of this treatment in 2 persons whose infections were nonetheless controlled. Four patients experienced nausea, with mild vomiting in 2 of these instances; either headache or flatulence was seen in 2 others; diarrhea and proctitis occurred in 1 patient; prickling, burning sensations about the mouth or face and ears were reported by 2 other patients. A mild rash with erythema and itching was experienced in yet another patient. One patient was successfully treated for a cellulitis, but she then developed a staphylococcal infection which proved to be penicillin-resistant. Only 3 among these 11 patients had also received the initial intramuscularly-administered dose of 600,000 units of penicillin.

Where this oral therapy was used in hospitalized patients, nursing personnel expressed great satisfaction with the time-saving factor. Then, too, risks of sepsis at the site of injection, or sensitization of hospital personnel, were eliminated by the oral form. Patients recovering from operation were also pleased not to be injected repeatedly. Office and home-patients were equally satisfied with the oral medication and, judging from the excellent results obtained, took it faithfully.

Conclusion

Oral penicillin in the form of potassium phenethicillin has great practical, clinical value. The compound permits the physician to gain the full advantages of penicillin therapy while appreciably reducing some of its possible hazards. This is not to suggest, however, that cautions be abandoned or that the drug be used indiscriminately. Introduction of oral phenethicillin into practice, though, has done much to extend, enlarge, and prolong the usefulness of penicillin. Physicians who have failed to try oral phenethicillin because of their dependence upon intramuscular penicillin have denied themselves and their patients the use of a choice new pharmaceutical product.

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STAFF CONFERENCE

Gailor Psychiatric Hospital* A Medico-Legal Case

DR. JAMES A. TAYLOR: We are presenting a woman who has admitted committing murder. The problem: She was found by Dr. Aivazian in 1958 to be "insane" and on the basis of his report she underwent a Lunacy Hearing. From there she was sent to the Hospital for the Criminally Insane. After a period of time the prisoner was considered recovered and returned to the Shelby County Criminal Court. In view of the seriousness of the crime, the Court wants an evaluation of her present mental status and her status at the time the crime was committed, (that is, was she "insane"?). This is a good example of a case wherein a serious court decision depends upon our judgment and our carefully considered recommendations. Mr. Eades will present the social history.

MR. JOE EADES (Psychiatric Social Worker): The informant for the social history was the patient's estranged husband, a 54 year old, neatly dressed, light-skinned negro man who appeared to be quite anxious and defensive throughout the interview. He regarded the patient as always having been a "mental case." When asked to clarify this statement, he mentioned only that she had always had a bad temper and had threatened him on numerous occasions. The informant was quite vague and had little knowledge of the details of the early history of the patient. He did know that she was born in Mississippi, and he knew a little about her immediate family. The patient and her husband were married in 1945, and according to the informant their relationship was satisfactory at first but became progressively worse after the first two years. According to the informant the patient was very temperamental and jealous, frequently accusing him of "running around." The patient also was supposedly quite critical of her husband's drinking and

threatened to harm him when he had been drinking. According to the informant the patient slept with a hammer and ice-pick under her pillow almost every night after they had been married for two or three years.

The husband stated that the patient had eight children, seven of whom were his. He states that the patient stabbed him in 1947 and he had to be hospitalized, and she stabbed him again with an ice-pick in 1954 which led to an injury to the lung and re-hospitalization.

According to the informant, he and his wife were separated in December, 1957 because of the patient's threat to harm him as she did not think he was bringing all of his money home and because he was drinking heavily. Informant stated that he did not see his wife again until after she had been accused of murder in March, 1958.

I made a telephone call to an uncle of the patient recently and he pointed out that the patient was "very temperamental and hard to get along with." He also indicated that the patient's husband was quite a heavy drinker. This second informant pointed out that on the Sunday prior to the alleged murder the patient called him, begging him to come over to her house. He said that she was quite vague over the telephone and sounded upset. When he arrived at her house she was crying because she had no money to feed the children and the water had been cut off. He went to his church and collected some money and brought it back to the patient. When he returned she seemed to be ungrateful and told him that everybody was against her, and according to this informant, the patient threatened to hurt him. He stated that he had been quite concerned about the patient as a result of this contact with her but did not know what to do. He did point out that she acted like a very "strange and dangerous person" at the time he saw her.

DR. TAYLOR: Dr. DeMinico will present the patient's mental status.

DR. CHARLES P. DeMINICO: This prisoner, a 41 year old married colored female, was committed to Gailor Psychiatric Hospital for thirty day observation and diagnosis. On April 17, 1958 it was determined at a Lunacy Hearing that she was suffering

*From the Department of Psychiatry, University of Tennessee College of Medicine and Gailor Psychiatric Hospital, Memphis, Tennessee.

from a mental illness and she was sent to a hospital for the criminally insane for treatment. The prisoner was indicted for stabbing a man to death with an ice-pick on March 11, 1958, and the post-mortem examination revealed 67 stab wounds. She allegedly thought that the victim was her husband but he turned out to be a total stranger. The patient states that this man grabbed her from behind as she was walking along the street, and she, thinking that it was her husband who had previously threatened to harm her, stabbed the man with the ice-pick which she was carrying for self-protection because of these threats. The patient, having improved or recovered after 2½ years hospitalization, and being considered competent was returned from the hospital to the Shelby County Criminal Court for disposition. The court referred her here with directions to report findings regarding her present mental status, including the diagnosis and prognosis.

The patient appears to be comfortably adjusted to her situation in the isolation ward and exhibited no unusual behavior while under observation. She passes time by doing jigsaw puzzles and reading the Bible. On questioning, the patient is circumstantial in her answers. Progression of speech is normal, but at times she rambles on about apparently unrelated subjects in the course of her conversation. She presents a generally shallow affect, and smiles more than appears appropriate. No great emotional changes are noted when discussing details of the stabbing incident with which she is charged. There is no present overt evidence of delusions, ideas of reference or hallucinations on repeated interviews, but the patient admits to having experienced some delusions and auditory hallucinations in the past before the incident. The patient is oriented as to time, place and person. Her memory is intact except for some cloudiness involving a period of time preceding and following the incident when events are hazy. Insight into her mental illness is lacking and judgment is impaired.

The patient is an obese woman who appears about her stated age. She is cooperative and smiles benignly. Her general physical condition is good. All laboratory tests including blood serology are within normal

limits. X-ray studies are negative. EEG reveals some abnormally fast activity of a non-specific type. Psychological tests have been completed.

DR. TAYLOR: Dr. Battle would you present a summary of the Psychological tests?

DR. ALLEN BATTLE (Clinical Psychologist): I examined this patient on 25 January 1961 by means of the Rorschach, Bender-Gestalt, and vocabulary scale of the revised Stanford-Binet (Form L). The patient was cooperative and cordial. The findings on both the Rorschach and Binet vocabulary scale suggest that the patient is well able to make an adequate intellectual adjustment in her own cultural milieu. She does not have difficulty in defining words common to her own experience but is unable to proceed beyond the more concrete verbal symbols usual to members of her class. Specifically, she obtains on the Binet a mental age of 10 years 9 months, giving her an intelligence quotient of 72. While this estimate of intellectual functioning places her in the category of mental deficiency, mild, it should be considered as artifactual to cultural factors. She seems to have a rather strong need for affectional satisfactions, relative certitude before committing herself to a position, and support from those around her. Although she has high goals for herself, she feels incapable of fulfilling them. At the time of this examination there is not a sufficient amount of evidence to warrant the conclusion that she is psychotic. One can see quite readily, however, that when the patient is experiencing intense emotion that she would have great difficulty in controlling herself, a type of situation which is very frequently associated with Brain Syndrome. In this case, it would seem that the damage is of a more pervasive type.

[The patient is presented and interviewed by Dr. Taylor.]

DR. TAYLOR: As I mentioned above, in view of the seriousness of this case, I would appreciate the considered opinions of the staff relative to this woman's mental status at the time the crime was committed. Dr. Godsey would you express your opinion?

DR. WILLIAM C. GODSEY: I feel the patient was psychotic in view of the fact that her ability to test reality was affected

and she was interpreting things in a strange way so that she appeared definitely out of contact with her environment.

DR. LUISE GEYER: Moreover, she was "seeing strange people and hearing funny talk," and feeling apprehensive that something bad was going to happen. Her reaction to this was unrealistic in view of her having gone out with a weapon to protect herself against "threats." I feel that the average person would have looked for help in some other way.

DR. MARION R. MOORE: It appears to me, from her answers to the questions asked today, that she knew what she did and knew that it was wrong. I am referring in particular to the question: "If a policeman had been there at the time would you have done what you did?" Here she answered in the negative and stated that she would have gone to him for protection.

DR. TAYLOR: Do you think she could have conferred with counsel and defend herself in court if she had been brought to trial?

DR. MOORE: I feel that she was in a psychotic state at that time and could not have conferred with counsel.

DR. G. H. AIVAZIAN (Clinical Director): I'd like to make a remark here; Dr. Moore has raised two important questions: (1) Did she know the difference between right and wrong? and (2) If a policeman were there would she have attacked the man? However, the important points are: did she know the difference between right and wrong (pertaining to this particular act) rather than the difference between right and wrong in the abstract sense of the concept? Secondly, if a policeman had been there she said she would not have done what she did, not because she was afraid of being arrested or because it was the wrong thing to do, but because she would have had the choice of going to the police for protection against the "aggressor." It is quite evident that she did not know the difference between right and wrong and believed firmly that she was in danger.

DR. GEORGE W. WRIGHT: I think in view of the history which contains delusions, ideas of reference, hallucinations and paranoid ideation she was psychotic at the time of the act with which she was charged.

DR. JAMES E. MORRIS: This woman has manifested both withdrawal and suspiciousness in the past. She has been subjected to severe emotional stresses such as being deserted by her husband, financial worries, and other factors. With her personality predisposition these stresses could very well have led to a psychotic break. Therefore I feel that she was definitely psychotic at the time of the incident.

DR. SIDNEY SHANKMAN: In view of her cultural background we must consider how much of her ideation is paranoid and how much is a reflection of her culture. However, I feel that her marked projection and distortion of reality, together with vagueness in thinking, ambivalence and delusions and hallucinations, is indicative of a schizophrenic disorder, paranoid type.

MR. EADES: I have some further information that the patient's husband's father was killed in a homicidal act which indicates to me that this type of behavior was common in the patient's environment, and therefore I would consider her carrying an ice-pick as "normal" behavior.

DR. ALLEN BATTLE: My psychological findings cannot indicate what this patient's mental status was at the time she committed the murder nor, indeed, is there any other available means besides the history of accomplishing this end. If, however, one must forward an hypothesis, then on the basis of the data available I would say that the patient was psychotic. Such a condition would be consonant with her present personality structure and functioning.

DR. DAVID F. MOORE: The history indicates a paranoid personality with marked suspiciousness. She has in the past committed numerous acts of violence, felt persecuted and threatened not only by her husband but also by her uncle. She misidentified a stranger and stabbed him 67 times. Today she was not perturbed in the least while telling her story. I feel that she is psychotic and dangerous to others.

DR. AIVAZIAN: In April, 1958, I committed my opinion in two respects: that at the time of examination she was psychotic and unable to confer with counsel, and that her condition was chronic. There was a time interval of three weeks between the incident and my examination. The opinion

expressed regarding the chronicity of her condition must be supported. With the material presented today we have a clear indication of a process which has been going on for a long time, not only for weeks or months but probably much longer. There were insidious symptoms of disturbed behavior in the past several years. Moreover, the clinical picture seen in April, 1958 is unlikely to appear suddenly out of a clear sky. Schizophrenia as a rule has an insidious onset, although an acute onset is not very uncommon. This patient's history indicates that certain symptoms were noted prior to her committing the crime. Therefore, the question of whether the patient was psychotic at the time of the crime or not, I have no doubts. Also, I have no doubt that she had been sick for a considerable time prior to that date. Another important question to consider is the prisoner's present mental condition. On the basis of observations made during her current hospitalization, and on the basis of today's interview, it appears to me that there is presently very definite evidence of thought disturbance, poor contact with the environment, diminished and inappropriate emotional response, and poor judgment. Although delusions and hallucinations do not seem to be overtly manifest now, I feel that this is a case of chronic schizophrenic reaction *in partial remission* rather than recovered or markedly improved.

DR. TAYLOR: The patient is still psychotic and experiencing a chronic case of recurrent illness. We know from experience that the patient is in a state of partial remission probably as a result of being in a protective environment. How will she act in the future, out of this environment, and facing the stresses of everyday life? The important question is: What can we recommend to be done for her? Under law not much can be done. She will return to her home if released and possibly continue under no supervision. Therefore, how can we determine her probable response to stress? I am concerned about this!

MRS. JEAN C. CHAMBERS (Director of Social Service): Actually it is the court which makes the decision relative to criminals being released.

DR. TAYLOR: Still it is our duty to give the Court all the information that is possible. Therefore, although she is in a state of remission today we have a moral obligation to be concerned about her future adjustment.

DR. AIVAZIAN: We should make recommendations concerning further hospitalization and treatment. She has received treatment and improved from it. Treatment was discontinued several months ago. I feel that there has been some regression in her mental state lately as compared with her status several months ago when treatment was discontinued. In similar cases the relapse rate is far greater with discontinuance of therapy than with continued medication.

DR. TAYLOR: I agree. Let's also consider the profound absence of any sense of guilt and how this can affect her future actions. This was an "accident" as far as the patient was, and still is, concerned and she feels justified. She shows no regret or remorse on taking a human life. This worries me.

DR. AIVAZIAN: Your remarks further support the view that she was psychotic then, is psychotic now, and requires continued supervision.

In conclusion, the consensus is that the prisoner was psychotic at the time she committed the crime. If this opinion is accepted by the court, she will not be considered responsible for her act, and she will be free to return to the community. In our opinion she has regressed since the time of her discharge from the hospital, is presently psychotic and is potentially dangerous to others. We would feel uneasy to recommend freedom in society without effective control over this woman, or even having her followed as an out-patient. Our recommendation would be continued supervision and treatment within a hospital.

CLINICOPATHOLOGIC CONFERENCE

City of Memphis Hospital*

Dissecting Aortic Aneurysm

C. I., a 56 year old colored man, was admitted on January 25, 1960. Twenty hours prior to admission, the patient began suffering from severe, sharp substernal pain. The pain radiated both up and down the sternum and also parasternally bilaterally. The pain was persistent and described as being a "feeling of tightness" in the chest; this was accompanied by shortness of breath especially in the supine position, which was slightly relieved by sitting up. The pain persisted during the night accompanied by shortness of breath, which was aggravated by exertion (walked to the bathroom several times during the night). The pain occasionally radiated into the anterior neck. The next morning (day of admission) while still having chest pain he walked to the bus stop and proceeded to work. While lifting a 10-pound sledgehammer at work, the pain became unbearable and was accompanied by severe shortness of breath. He was subsequently brought by ambulance to John Gaston Hospital.

Review of Systems. He had had occasional headaches, shortness of breath on moderate exertion for the past two to three years, and shortness of breath on slight exertion for the past five and six weeks. Frequent episodes of nonradiating, substernal pain, lasting one to three minutes, occasionally precipitated by exertion and also occurring at rest had been present since November 1959. No orthopnea, palpitations or paroxysmal nocturnal dyspnea or edema had occurred.

Past History. He had had a stab wound of abdomen in 1949 which was explored. Kidney infection occurred in 1940.

On physical examination the temperature was 98.2°, pulse 96, respirations 28 and blood pressure 80/60. The patient was a well-developed, well nourished colored male, sweating profusely and complaining of severe substernal pain. The trachea was in midline, slight neck vein distention. Lungs were clear to auscultation and percussion. Cardiac PMI. was in the 5th left intercostal space at the anterior axillary line and without murmurs, thrills or arrhythmias. The liver was palpated 2 finger breaths below right costal margin and tender; spleen was not palpable and there were no masses, distention or ascites. The blood vessels were normal and had equal pulsations. The skin was cold and wet. There was no ankle or pretibial edema. The right testicle was twice as large as the left; a whitish thick discharge was present at urethral meatus. Rectal examination was negative. Neurologic examination was normal.

Laboratory Studies. Hematocrit was 39, WBC. 12,700 with a normal differential picture; thrombocytes were adequate, sed. rate was 30 mm./hr.

Urine (with Foley catheter in place) showed a pH of 5.0, sp. gr. 1.015, sugar 1+, protein 1+, RBC. 30-40/HPF, WBC. 75-100/HPF, occasional coarsely granular cast.

An electrocardiogram on admission revealed sinus tachycardia, nonspecific ST-T changes. Portable chest film revealed rather tremendous enlargement of the heart in a generalized manner, though predominantly left ventricular. Mild congestive changes in the pulmonary vessels; questionable presence of pleural fluid in the left base.

The patient was given morphine, oxygen, and Aramine, and was started on anticoagulants. He responded fairly well to emergency therapy and seemed to become stabilized. SGOT determination on four successive days were 29, 106, 111, 58 units respectively. On January 29, 1960, the patient suddenly went into shock accompanied by severe dyspnea. Electrocardiogram at this time revealed sinus tachycardia, left bundle branch block, pathologic LAD, and tall peaked T waves. The patient was digitalized, given Thiomerin, and started on a Levophed drip. Prothrombin time on this day was 54 seconds. The response to CHF and shock therapy was fair. Pulse slowed to 100 and remained regular, and blood pressure stabilized at 110 systolic. Later that evening, 8 p.m., examination revealed a grade III-IV systolic murmur at the apex which radiated into the axilla. The patient's condition remained essentially unchanged until 4:30 a.m. on January 30 when he suddenly became dyspneic. One minute after its onset there was no obtainable blood pressure and breathing suddenly stopped. He was pronounced dead at 4:35 a.m.

DR. CHARLES DEERE: We do not have the benefit of observations of this patient prior to his final illness. In approaching sick patients we should try to picture what their state was immediately preceding the dramatic change. We have the history that this man had exertional dyspnea for 2 or 3 years, appreciably worse in the last few weeks. This suggests impairment of myocardial reserve. Also for two months, he had had substernal pain, lasting for 1 to 3 minutes, upon exertion and also at rest. This suggests coronary insufficiency which most often would be due to serious sclerosis of his vessels. We do not really have substantial evidence that this man had an old infarct, but it is possible that he may have experienced occlusion of coronary vessels. May we see the chest film now, Dr. Carroll?

DR. DAVID S. CARROLL: The x-ray examination of the chest reveals a rather marked enlargement of the heart, the contour is that of left ventricular enlargement. There is some widening of the superior

*From The City of Memphis Hospital and The University of Tennessee, Memphis, Tenn.

mediastinum which could easily be explained by a somewhat elongated aorta. The lungs show definite congestive changes. (Fig. 1.)

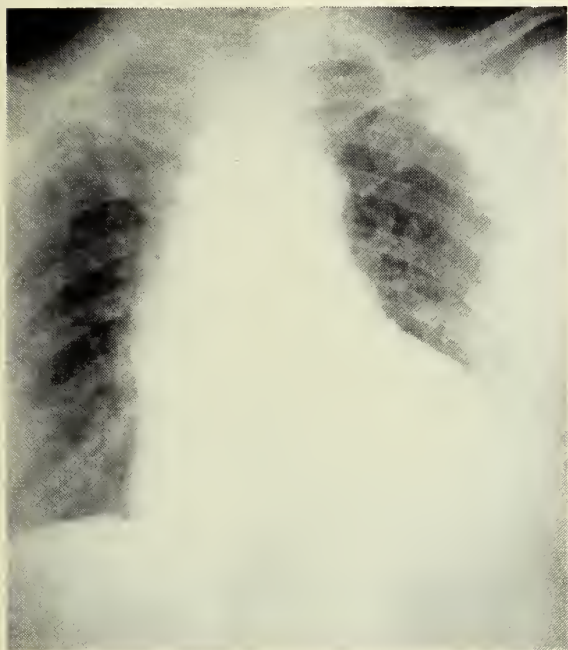


FIG. 1.

DR. DEERE: This man's cardiac enlargement certainly is in keeping with the history concerning his myocardial reserve. In summary, I think the history gives us very good evidence for the presence of arteriosclerotic heart disease. It is possible from the findings given us to the present that this man also was hypertensive in the past. The onset experienced 20 hours prior to admission is a perfectly good history of myocardial infarction, the location, quality and radiation of pain all being compatible. His attempt to work earlier on the day of admission is not unheard of in patients with myocardial infarction. We have seen people who continued with farming activities for days following infarction.

The initial physical examination records some tachypnea moderately severe hypotension and marked sweating, all of which tend to confirm the clinical impression of myocardial infarction. The protocol does mention the possibility of fluid in the left chest. Dr. Carroll did not say anything about that in his discussion. Of course, a dissecting aneurysm of the aorta may bleed into the left pleura space, but I am not impressed that we have very strong evidence

for that condition. There does not seem to be anything to suggest intra-abdominal disease. There is a history of a kidney infection in 1940. This is quite uninformative and could mean anything from urethritis to pyelonephritis. The physical examination and urinalysis suggest that possibility of involvement of both the kidney and the lower urinary tract. I doubt that these have anything important to do with the man's illness. I do not believe that we would have to call upon a vascular accident involving the kidneys to account for these urinary findings. The glycosuria is of interest, if it is not due to the administration of glucose. This has been described occasionally in patients with myocardial infarction. It has been suggested that the illness may exaggerate a diabetic tendency or that it may be an epinephrin response to shock.

The laboratory findings seem to confirm strongly the clinical impression of myocardial infarction. He had leukocytosis and the more specific SGOT reaction was normal, reached a peak on the third determination and then fell. It seems obvious that the clinical impression of those attending the patient was myocardial infarction and appropriate therapy was started. Prothrombin time had become excessive by the fourth day and this would favor intramural or epicardial bleeding. I doubt that we have enough information to conclude that either of these complications occurred.

The cardiogram on admission revealed nonspecific ST-T changes. These changes are not the characteristic ST segment shifts which are often the first electrocardiographic evidences of infarction. These characteristic changes occasionally are not prompt in making their appearance. This initial cardiogram fails to give evidence of an old infarct in the form of significant Q waves. We should recall that classical Q waves changes are dependent upon transmural infarction, so that intracavitary negativity is transmitted to the exploring electrode. We should recall also that the subendocardium is the most vulnerable of the myocardium to acute damage, being farthest from its blood supply and also subjected to higher pressure than more peripherally situated muscle. Serial tracings are particularly indicated when the initial trac-

ing fails to confirm the clinical impression. There was a second cardiogram at a time when the condition of the patient deteriorated some 4 days after admission. This could well represent the natural course of myocardial infarction in the patient who already has poor myocardial reserve. The second cardiogram revealed left bundle branch block, suggesting the possibility that the septum may have been more poorly nourished at that time than it had been earlier. This could be accounted by sclerotic changes in the coronary vessels along with shock to which the patient was subjected repeatedly, or it could represent actual infarction involving the septum rather than the free ventricular wall.

Later in the day the patient's condition deteriorated, and he developed a fairly loud apical systolic murmur which was transmitted to the axilla. Certainly the most common cause of this murmur would be mitral insufficiency, possibly secondary to ventricular dilatation from damaged myocardium. I think one other thing that would have to be considered as giving a possible explanation for this finding would be rupture of the left ventricle. Often that is so suddenly fatal that there is not time for very much observation, but not always. The most common site of ventricular rupture is near the apex. Ventricular rupture has been observed to produce either a systolic or a continuous murmur. Factors that are said to predispose to rupture of the ventricle as a complication of myocardial infarction are pre-existing hypertension and the overly vigorous use of pressor agents. I do not think we can be critical of the use of pressor agents in this patient. Certainly they were justified by the findings. I would be more seriously inclined to consider rupture of the wall of the left ventricle if this patient had electrocardiographic changes indicating apical or anterior wall infarction.

Another possible explanation of sudden deterioration would be rupture of a papillary muscle, secondary to infarction. This has also been described as producing varied auscultatory findings. It has been described as producing a loud apical systolic murmur, a pseudofriction rub, or both diastolic and systolic murmurs. Also it has been said to occur without production of any auscultatory abnormality.

This is a rare complication of infarction in proportion to others mentioned. There is no reason why rupture of a papillary muscle should cause bundle branch block. Rupture of the interventricular septum tends to produce a loud systolic murmur, but this murmur is usually loudest in the parasternal area and not at the apex. Often it is accompanied by a thrill. Rupture of the intraventricular septum, certainly would be more likely to be associated with the conduction defect as was found in this patient. I do not know really what significance to attach to the tall peaked T waves mentioned in the second cardiogram. At times, T waves bearing this description have been described as the very earliest change in myocardial infarction, occurring even before the ST segment deviations. This has been attributed to local electrolyte changes with potassium leaving the injured cells. This type of T wave, I presume, might also be seen with systemic hyperkalemia. We have no real evidence which will enable us to conclude that such was present. I had decided that this was a case of arteriosclerotic and possibly hypertensive heart disease also; that the patient had myocardial infarction; that the myocardial infarction probably involved the septum out of proportion to the free ventricular walls; and that a few hours prior to his death, he had a catastrophe involving a papillary muscle or possibly the interventricular septum. I am unhappy with the suggestion of septal rupture in the face of a good house staff and the statement that the murmur was apical and transmitted to the axilla. I would feel much safer in suggesting the possibility of septal rupture had the murmur been in a different location. Speculating that this may not be myocardial infarction as I have been forced to conclude, could this be a dissecting aneurysm? A dissecting aneurysm could have compromised the coronary circulation initially and may have terminally produced tamponade. I do not think that is the best explanation of the findings that have been described. This man had no inequality of pulses, and no neurologic abnormalities. It seems that several of the features that tend to direct our attention to dissecting aneurysm actually are absent in this case.

DR. FRANK TULLIS: Thank you Dr.

Deere. Dr. Francisco, would you please tell us your findings?

DR. J. T. FRANCISCO: This individual weighed 202 pounds, was well-developed and about 6 ft. 1 inches in height. His coronaries were clear. There was a dissecting aneurysm of the aorta with a rupture into the pericardial sac with approximately 100 cc. of blood present. This is more than one would expect in an acute rupture of the heart or aorta. Therefore, in this particular case, I believe the rupture probably occurred at the time of this man's admission, certainly some time before his last catastrophic episode. The lesion in the aorta was a laceration of intima, approximately one-half inch above the aortic valve with a tear in the adventitia of the aorta on the medial aspect of the aorta where the blood escaped into the pericardial cavity. A 2 cm. hematoma was also present about 2 cm. superior to these two ruptures and within the aortic wall. Arteriolonephrosclerosis was present in the kidneys. In relation to the serum SGOT changes, the liver had microscopic paracentral areas of necrosis and this may explain the elevation of this transaminase value. (Fig 2.) These areas of necrosis are

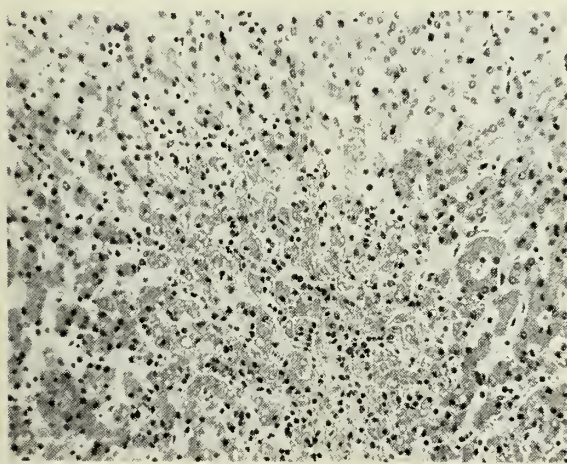


FIG. 2.

presumably on an anoxic basis secondary to the acute passive congestion. Alveolar emphysema was also present. The heart weighed 680 Gm. with both a right and a left ventricular wall hypertrophy. The right ventricular enlargement was approximately 2 to 3 times normal size, the left ventricular was also 2 to 3 times normal size. Emphysema in all probability contributed to the right ventricular enlargement. Mucus was

present in the small bronchi and bronchioles, which represents the man's terminal hour in which he was not able to remove this mucus. Other urinary findings were benign prostatic hyperplasia with some obstruction to the urinary outflow. There was chronic cystitis and chronic nonspecific urethritis was present. Testicular atrophy was present. The islets of the pancreas are fibrotic. Although this is not a specific lesion for diabetes mellitus, it is certainly seen rather prominently in patients with diabetes mellitus. The etiology of this particular dissection is medionecrosis of the aorta. (Fig. 3.) This change is most marked



FIG. 3.

at the junction between the outer third and inner two-thirds of the aorta, where dissections commonly occur. This is one reason why the theory that arteriosclerosis of the vasa vasorum is considered a cause for the cystic change within the aorta. It is known that toxic factors such as certain species of sweet peas, when fed to an animal will produce this change and necrosis. We cannot eliminate some toxic factor operating to produce this change. One interesting factor on this line is the the blue-stained material that we see in the aorta is chondroitin sulfate. Chondroitin sulfate is a material which binds polyvalent ions more strongly than it does univalent ions such as sodium or potassium. Arsenic, which is an endothelial poison, could very well be bound more strongly by this material and thus produce endothelial damage, edema and cystic change in this area. I have nothing to support this theory, but I just put it forth for

comment. I think that this particular change is in all probability edema in a focal area of necrosis. The renal arteries show this degenerative type change in the outer portion of the renal vessel, but not as striking as one can see in the aorta.

In summary, we have a patient who had cystic medionecrosis of the aorta, dissection of the aorta with rupture into the pericardial sac at the time of admission or shortly thereafter. This is much more blood than one would see in an acute rupture. It is usually the older slowly progressive case of hydropericardium in which the amount of fluid is up around 1000 or 1500 cc. Secondly, that this particular man had no evidence of coronary atherosclerosis. The coronaries were clear. In relation to that, the aorta showed very little evidence of atherosclerosis.

DR. TULLIS: Was there any interference with the origin of the coronary arteries by the dissection, Dr. Francisco?

DR. FRANCISCO: No, this was a very short dissection, extending proximally from the hematoma to the area of original breakthrough.

DR. TULLIS: I might comment that as I go back and try to piece together this story from the very beginning retrospectively, I still find it difficult to arrive at the conclusion that this patient had dissecting aneurysm. If we were confronted with this patient again today, could we reach the conclusion that he had dissecting aneurysm of the aorta? Admittedly one of the first things we must do is arouse our suspicion that a given chest pain picture might be dissecting aneurysm, and we can do this best by remembering disorders in which dissecting aneurysm has a greater incidence. First of all, people with Marfan's syndrome are more apt to suffer dissecting aneurysm, but I cannot see that there is anything here to make us feel that this patient has the disorder, although we must remember that the relatives of patients with Marfan's disease may be only long-limbed individuals. A second disorder with increased incidence of dissecting aneurysm is hypertension, and we had this clinically to arouse our attention here. Pregnancy, obviously, we can exclude, because this is a man, although we might remember that in young people, the

most common situation for dissecting aneurysm is the young pregnant woman. Coarctation of the aorta, calcific aortic stenosis and other isolated lesions have been known to have associated with them a greater incidence of dissecting aneurysm.

The second alerting sign would be the presence of murmurs (I am assuming that we have an individual with chest pain), yet we did not have a single murmur come into the picture until the change of events. At that time a murmur was present, but before that there had been no murmur. I doubt that the last word has been written on the problem of serum transaminase in dissecting aneurysm. We all can see readily where a dissection in the aorta interfering with a coronary take-off, can cause myocardial necrosis to produce a rise in transaminase. I am impressed that we are seeing more patients in whom we are not completely certain that there was any interference with the coronary artery, and yet the transaminase has been elevated in some people in dissecting aneurysm. Perhaps there is a cause for this that has not yet been demonstrated. I would be willing to accept your explanation here that it is hypoxic necrosis of the central vein in the liver. Dr. Carroll, now that you have heard the rest of the story, can you retrospectively diagnose this and, if not, how can you diagnose it the next time?

DR. CARROLL: When I discussed the films previously, I knew the diagnosis. I certainly could not make a diagnosis in this case with this film. Aortic dissection commonly causes some widening of the superior mediastinum. However, the mediastinum in this case was no more widened than one would normally expect with a rather elongated, dilated tortuous aorta. Occasionally in cases of aortic dissection there is indistinctness of outline of the aortic knob or an alteration in the smooth aortic arch contour. However, the aortic knob in this case looked perfectly normal on x-ray. In many instances there is hemorrhage into the pericardium. However, a sudden accumulation of pericardial blood does not usually lead to significant increase in apparent heart size since the pericardium does not have the time necessary to stretching. Therefore, the accumulation of fluid in the pericardium is

at the expense of intracardiac volume and does not result in an increase in size of the apparent heart shadow on x-ray. With the accumulation of pericardial fluid, however, there should be rather marked reduction in the amplitude of cardiac excursions as seen fluoroscopically. Fluoroscopy would have been of value in this case but apparently it was not done. Finally, when there is some reason to suspect aortic dissection, the diagnosis can be made with a great deal of accuracy with angiocardiology. This procedure can be done by either of three methods. Firstly, it could be done in a retrograde manner by injecting media through a catheter directly into the aorta. This would probably be quite dangerous. The second method would be that of injecting the medium into the left ventricle by means of a subcutaneous left ventricular puncture. However, this would also be rather dangerous unless one can rather confidently exclude the possibility of myocardial infarction. The third method would be to put a catheter into the superior vena cava and inject the medium through the catheter, taking x-ray films rapidly enough to follow the dye through the heart and into the aorta. This should be the least dangerous procedure and should show the aortic dissection without any difficulty.

DR. TULLIS: Thank you, Dr. Carroll. I think it is well to know these points. The clinician must reach a point at which his index of suspicion is sufficiently high to take this next step, and this is a real problem. It is hard to know when to go ahead. None of us welcomes putting a needle through an infarcted area of the left ventricle. Dr. Deere, do you have additional thoughts on the subject?

DR. DEERE: Looking back on it, the fail-

ure of development of characteristic electrocardiographic findings was the strongest point against infarction. We are all aware that the liver is rich in transaminase. This, to my knowledge, is the first time I have seen the liver account for values that fit myocardial infarction so perfectly, even falling on the fourth day. I am still puzzled as to the mechanics of the loud murmur heard in the last few hours of life.

DR. TULLIS: Thank you, Dr. Deere. Dr. Francisco, do you have another point?

DR. FRANCISCO: I have two comments to make. One, to explain the left bundle branch block that was present in this individual, there was subendocardial hemorrhage within the left ventricle, presumably on an anoxic basis. Second, I think, the murmur was probably a functional change, secondary to the cardiac failure of this particular patient. There was some left ventricular dilatation present.

DR. DEERE: I am still puzzled about the murmur, or was it a friction rub? Tamponade compresses the heart. How can this be used to account for mitral insufficiency? The electrocardiographic changes were not those one might expect from hemopericardium.

DR. TULLIS: I might comment, along the line of Dr. Francisco's point of the hemorrhage having occurred early into the pericardium, that seepage into the pericardium can occur. There does not have to be frank, violent rupture and bleeding into the pericardial sac. Seepage can occur in which this blood accumulates over a period of days. I do not know that that particularly happened here.

I would like to thank Dr. Deere, Dr. Carroll, and Dr. Francisco for excellent discussions.

**Extended Operations for Treatment of Cancer—
C. Eckert, Arch. Surg.—Vol. 82:562 (April)
1961.**

Those operations used in the treatment of cancer which, by virtue of their scope, are called extended operations are attended by potential increases in mortality and morbidity, and their ability to increase survival is not fully proved. Before deciding that a given operation is justified, evidence should be obtained that the behavior of the tumor is such that radical operation

may increase curability. The impact of disabling sequelae and the increased operative mortality can best be estimated by the construction of useful life expectancy tables and comparing them with useful life expectancy following other forms of treatment. By using these criteria it is shown that in selected cases composite operations for oropharyngeal cancer, pelvic exenteration for uterine and rectal cancer, and en bloc resection of the internal mammary lymph nodes for breast cancer are justified.

President's Page

SOME OBSERVATIONS FROM OUR ANNUAL MEETING



WILLIAM O. VAUGHAN,
M.D.

Our experience with the annual meeting of the Association deserves further consideration to some changes in the annual meeting program. Our annual meeting registrations are fairly satisfactory, but there is increasingly poor attendance at the General Scientific meetings. In practically every instance, so few are in attendance at the scientific lectures that it is a source of embarrassment to the essayist. This is particularly true when we have an out-of-state guest speaker. I attended some of the scientific lectures at our meeting in Chattanooga, and on two occasions by actual count, there were fifteen doctors in the audience for one of the papers and twenty-two for another.

Practically all of the organized specialty societies conduct their meetings concurrently with the Tennessee State Medical Association during the three-day session.

A solution to our attendance problem might be to do away with the General Scientific Sessions, provided these specialty groups were agreeable to making their scientific meetings available to any member of TSMA. Your State Medical Association makes an honorarium to our out-of-state guest speakers on a rotating basis among the specialty groups that meet concurrently with the Association. If the General Scientific meetings are eliminated, it would take early and detailed planning to conduct a sectional meeting. Schedules must be arranged and planned far in advance. Our deadlines would have to be moved forward in order to meet such a schedule.

Another major problem confronting the Association at the State Meeting is the President's Banquet. Arrangements for this affair are largely the problems of the headquarters staff and they must make these arrangements in keeping with the facilities available at the hotel where the meeting is conducted. A superb job has been done to date. At times, however, there are dissatisfied members of TSMA due to the fact that they are unable to obtain banquet tickets although the opportunity to secure tickets by mail is made months in advance. I am sure that such problems that present themselves in arrangements for such an occasion are obvious to most of us. There is always a limit to seating capacity, food must be ordered and prepared for a given number for which your Association has to make a guarantee of payment. It is my belief, too, that this should be an evening of entertainment and pleasure, certainly with only a limited amount of time devoted to the more serious aspects of the Association.

As your President, I recommend that thought be given to sponsoring a buffet type of dinner and conduct the formal President's Night program in some other location. This will permit a greater number being accommodated and should minimize the number of complaints received by the officers and staff relative to members not being able to obtain tickets.

The Annual Meeting is your meeting and your officers and staff are only interested in improving where possible, the meeting as a whole. As your President, I will be interested in your reactions to these suggestions or others that any TSMA member might constructively make for the improvement of our annual meeting.

A handwritten signature in dark ink, appearing to read "W. O. Vaughan". The signature is fluid and cursive, with a large, stylized "V" at the end.

President

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Address papers, discussions and scientific matter to R. H.
Kampmeier, M.D., Editor and Secretary, 8210 Vanderbilt
University Hospital, Nashville 12, Tennessee
Address organizational matters to Jack E. Ballentine,
Executive Director, 112 Louise Avenue, Nashville 5, Tenn.

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MAY, 1961

EDITORIAL

SURGICAL TREATMENT OF PARKINSONISM

During the past eight years there have been tremendous advances in the development of surgical technics useful in the treatment of parkinsonism. Medical management of this progressively, incapacitating disorder has been unsatisfactory. The conservative approach with drug therapy provides 15 to 20% functional improvement of a transitory nature in the 60 to 80% of cases where drug therapy is intelligently applied. In addition to drugs, which should be given a trial in every case of parkinsonism, the physician must supply a high degree of compassionate interest and should consider, as adjunctive therapies, psychotherapy, physiotherapy and speech therapy. All of these measures are at best temporizing, and none will halt the inexorable progress of the disease which, in the majority of cases, unless reversed, will lead to incapacitation and helplessness. As can be seen, the pres-

ent type of medical management is not satisfactory for this disorder and because of this has come the surgeon with a destructive approach to a specific area of the brain providing cure instead of palliation.

One of the foremost advocates of surgical management of parkinsonism is Irving Cooper,¹ who has recently reported on the results of 1,000 consecutive basal ganglia operations for this disease. Although his original operation was anterior choroidal artery occlusion and later chemopallidectomy, the most common procedure employed by Cooper and his associates now is the chemothalamectomy. These procedures are especially useful when rigidity, deformity and tremor and attendant symptoms such as bradykinesia and gait and postural abnormalities are dominant. Eighty per cent of those subjected to chemopallidectomy or chemothalamectomy will obtain relief from these symptoms. The mortality rate for Cooper's first 1,000 operations was 2.4%, and the incidence of hemiparesis or hemiplegia was slightly less than 3%. Complete freedom from the rigidity and tremor can be effected by surgery, and many five year cures have been reported.

Correct localization of the lesion so as to afford maximum relief with a low incidence of risk necessitates not only correct roentgeno-anatomic localization of lesion placement but also clinical physiological testing of a reversible lesion placed in the thalamus or other site within the basal ganglia. The lesion of choice for relief of parkinsonian tremor and rigidity is placed in the ventrolateral nucleus of the thalamus. Physiologic age is no contraindication to operation provided the patient's major complaints are tremor and rigidity. Although in younger people other symptoms have been helped, by and large, weakness and monotony of the spoken voice, difficulty in swallowing and excessive salivation have not been benefited by surgery.

In previous years, surgical treatment has been reserved for those who were terminal. Cooper and his associates feel that such treatment should be given relatively early

¹Cooper, I. S.: Results of 1,000 Consecutive Basal Ganglia Operations for Parkinsonism, Ann. Int. Med. 52:43, 1960.

in the course of the disease. They believe that male patients should be operated upon before it is necessary for them to give up gainful employment; female patients should be operated upon before they become unable to carry out their activities of daily living independently.

Certainly in the patient with very mild parkinsonism, medical management may suffice. However, it is well to know that the trained neurosurgeon can offer relief to about 80% of all patients who might otherwise progress inexorably to helplessness and despair, with a mortality rate low enough so this factor will not deter us from advising such help for parkinsonian patients.

If these results hold in other series, it is pleasant to speculate about the number of such doomed patients with parkinsonism who will be cured by a dime-sized destructive process in the basal ganglia. This, is truly a magnificent achievement of which medicine can justifiably be proud.

A. B. S.

★

IMMUNIZATION AGAINST TETANUS

At the last annual session, the House of Delegates of the Tennessee State Medical Association unanimously passed a resolution that publicity be given, as an act of public service, to active immunization against tetanus. It furthermore, was resolved that the delegates from the T.S.M.A. introduce a similar resolution at the next meeting of the A.M.A. House of Delegates.

The resolution followed statements calling attention to the hazards of clinical tetanus, the short-lived and at times dangerous results of passive immunization and the great effectiveness of active immunization. Attention was called to the injuries of civil life and the great casualties of military conflict.

This page endorses whole heartedly this resolution and wishes it might be implemented in the doctor's office, by the industrial physician and by public health authorities.

Ten years ago,¹ on this page, at about the time the concept of Civil Defense, was growing, we pointed out that an ideal goal of universal immunization against tetanus

should be part of the Civil Defense plan. We pointed to the mass of casualties which would result from atomic warfare.

Again, five years later,² on this page, attention was given to the clinical course of tetanus, the proven efficacy of active immunization, and the world-wide tensions which might lead to war with the inevitable incidence of tetanus.

Thus, at five-year intervals the efficacy and desirability of active immunization against tetanus has been stressed and urged upon Tennessee physicians. Only they, through education of their patients in the office, the clinic, in industry, and the public departments, will be able to initiate an approach to almost universal immunization.

★

R. H. K.

RESOLUTION COMMITTEES

At the suggestion of one of our delegates to the A.M.A. House of Delegates, attention is being called to the democratic processes invoked by the American Medical Association. All resolutions introduced to the House are referred to Reference Committees. They hold public hearings on the resolutions open to all who come. Here the pros and cons of any resolution are aired. Any member of the A.M.A. may call for the floor at these committee hearings and voice his opinions or ask questions. This prerogative is not known to many members and thus attention is directed to it on this page.

Thus, if any Tennessee member of the A.M.A. wishes to "have his say" before a resolution, changed or unchanged, is returned to the House, he should make note of this and appear at the proper resolutions committee.

This is an interesting and democratic process.

R. H. K.

¹Editorial: Immunization Against Tetanus and Civilian Defense, J. Tenn. M.A. 44:438, 1951.

²Editorial: Tetanus Immunization, J. Tenn. M.A. 49:24, 1956.

★

Special Item

The medical profession as well as those in medical education have realized for some years the losing battle of enticing qualified students into the medical schools. The lean years of an expensive undergraduate medical education and

graduate training, the promise of an immediate "good" future in nonmedical scientific fields, the loss of the doctor's status and respect in the community due to vituperative press and certain pressure groups, plus the uncertainties of possible governmental interference with medical practice as we know it now, all conspire to make the young man think twice before casting his lot with the followers of Aesculapius.

The Editor bows to, and compliments the activators of the Future Physicians' Club and recommends this move for all good citizens of this country.

The Future Physicians' Club

Lawrence L. Cohen, M.D., Memphis, Tenn.

Medicine today stands at the crossroads in the mind of the talented high school student. He is torn between a desire to enter medicine as his life's work or to follow the shining bids he will receive from other scientific fields and from big business. On the one hand he will face twelve to sixteen years of hard work and sacrifice, and on the other the promise of a scholarship and a secure position when his education is completed.

The Association of American Medical Colleges and the U.S. Bureau of the Census have just revealed these startling figures. In 1949, with the population of the United States at 149.2 million, 24.4 students per thousand were applying to medical schools across the country. In 1959, with the population at 177.1 million, only 15 students per thousand applied to medical school.

One does not have to be a statistician to realize that if the trend continues, we shall face a severe physician shortage in the coming years. This is the basic reason the "Future Physicians' Club" was founded. To put it in the words of the vernacular, I feel that we must recruit and "sell" medicine as a career to these talented high school students in direct competition to other, on the surface, more promising careers. I believe that every dedicated doctor who loves his work and mankind, should be a walking one man "Future Physicians' Club."

I would like to tell you about a program we organized in Memphis, in the early fall of 1960. I hope other clubs of this type will soon follow suit.

As an active member of the Memphis

Downtown Kiwanis Club, my first step was to organize a committee which became a part of the youth vocational guidance program. The local medical society, the Dean of the University of Tennessee College of Medicine, and the superintendent of the city schools, heartily endorsed the program. My next step was to approach the students in the high schools. As the school principals and their guidance directors approved the program, they were most helpful in setting up meetings for me. At the present time six of the major high schools are represented in the club, with an enrollment of approximately one hundred students. Fifteen percent of the group are girls. The students are in the tenth, eleventh, and twelfth grades. The members have been issued membership cards and at each meeting we display our club poster, designed and donated by a local citizen.

Our meetings are held on the first and third Wednesday of each month between four and six o'clock in the conference room of the Baptist Memorial Hospital. Lectures are given the first hour and demonstrations the second hour. We have tried to make the programs similar to the teaching programs of a medical school. The guest speaker uses slides, motion pictures, or patients to illustrate his topic. Thus far, we have had all of the surgical and medical specialties represented as lecturers. For the second hour, the group is divided into four sections. They are then taken on tours through the blood bank, the x-ray department, the laboratory, the orthopedic cast rooms, ward rounds, and into the operating rooms to see actual operations. The tours are led by surgical and medical residents.

The group recently saw a film produced by the American Medical Association "I Am a Doctor," which, I might add, is an excellent film. It may be ordered by writing directly to the American Medical Association. They will also send other career material to you. Other films that have been shown to the group are the following—"Esophageal Resection and Reconstruction," "Aortic Artery Grafts," "Vein Graft Operations for Deafness of Otosclerosis," "Superior Maxillary Sinus Resection," and the prominent operations in plastic surgery. The medical demonstrations have included elec-

trocardiograms, Drinker-Collins (iron-lung), a trip through the cardiopulmonary laboratory and class demonstrations of a child suffering from muscular dystrophy.

The response of the students has been amazing. This summer we have arranged jobs for the senior students at the local hospitals to help finance their medical education and we hope in the future to arrange a scholarship fund for deserving students. From the interest shown thus far, I believe "Future Physicians' Clubs" throughout the United States might well be the stimulus to improve the quality and quantity of American Medicine.

DEATHS

Dr. William Wesley Wilkerson, Jr., 63, Nashville, died March 14th at his home. He had been ill for nine months. Dr. Wilkerson was founder of the Bill Wilkerson Hearing and Speech Center in Nashville. In 1948 he was President of the Nashville Academy of Medicine.

Dr. Halbert Robinson, 74, Loudon, died March 24th at Bacon Hospital after a long illness.

Dr. George Gartly, 85, formerly of Memphis, died on March 23rd in Orlando, Florida. He was co-founder of the Gartly-Ramsay Hospital.

Dr. Randolph Armistead Cate, 44, Gallatin, died March 12th at his home. He was medical director of the Sumner County Health Department.

Dr. Robert Griffin Latimer, Sr., 70, Union City, died March 23rd at Obion County General Hospital.

PROGRAMS AND NEWS OF MEDICAL SOCIETIES

Chattanooga-Hamilton County Medical Society

The Society conducted its regular monthly meeting on April 4th in the Interstate Building. The scientific program consisted of papers delivered by three members. "Advances in the Surgical Treatment of Deafness" was presented by Dr. Charles H. Alper. "Medical Management of Occlusive Diseases of the Arteries" was the title of the paper given by Dr. E. Wayne Gilley.

A case report "Benadryl Intoxication Severe—Poison Prevention Aspects Plus Review Benadryl Pharmacology" was presented by Dr. James H. Spaulding.

Greene County Medical Society

The Society conducted its monthly meeting at the Elks Club on April 4, 1961. In the business portion of the meeting, Dr. Gibson, Legislative Chairman, gave a report on the final phase of the medical examiner bill, passed by the General Assembly. A report was rendered by Dr. Fox, President, on the current functions of the local cancer society.

Dr. Fox reviewed a news story by the Tennessee State Medical Association which constituted a rebuttal against the charges made in a national broadcast by Abraham Ribicoff, Secretary of Health, Education, and Welfare, in which he accused the nation's doctors of misleading the American public when they labeled the Kennedy administration medical care program as socialized medicine.

The scientific session of the meeting consisted of the showing of a film entitled "Infiltration Anesthesia in Obstetrics."

Memphis-Shelby County Medical Society

The society met for its monthly meeting in the auditorium of the Institute of Pathology Building on February 7, 1961. After a brief business session and announcements, the scientific program was introduced by Dr. Robert McBurney. Dr. McBurney presented Dr. Burt Friedman who then introduced the speaker of the evening, Dr. Carleton B. Chapman, Professor of Medicine at the University of Texas Southwestern Medical School, who spoke on "Diseases of the Mitral Valve with Demonstration of Valvular Disease by Cinefluorographic Technique." Dr. Chapman gave a most inspiring report on his work in this field and showed impressive slides and films of his studies.

White County Medical Society

Dr. and Mrs. Charles Mitchell entertained members of the White County Medical Society and their wives at a covered dish supper at their home in Sparta on March 27th.

Northwest Tennessee Academy of Medicine

More than 55 doctors, members of the Society attended with their wives and guests, a dinner given recently in their honor by

the Society Auxiliary on the 25th anniversary of the establishment of Doctor's Day.

Marshall County Medical Society

The Society held its regular monthly meeting at the Southland on March 21st. Dr. Hoyt Harris gave a paper on "The Surgical Treatment of the Rupture of Peptic Ulcers," reviewing the history of surgical treatment of this condition from 1881 to the present time.

John Sevier Chapter Tennessee Academy of General Practice

The John Sevier Chapter of the Tennessee Academy of General Practice heard Dr. John Armstrong, Somerville, state president, at a meeting in Greeneville on March 18th. Dr. Armstrong's subject was "New Frontier in Medicine."

NATIONAL NEWS

Relationships with Institutions

Guides Adopted by AMA in 1951 Are Reaffirmed and Declaration Made That Actions Taken Subsequently Are Not Inconsistent with Principles

"Guides for the Conduct of Physicians Relationships with Institutions" adopted by the American Medical Association in 1951 were reaffirmed by the House of Delegates at the recent AMA meeting at Miami Beach and it was agreed by the House that all actions on this subject which have taken place since the 1951 action "are not inconsistent with these guides but instead represent interpretation or efforts to clarify the guides for practical application."

In the course of taking this action, the House of Delegates adopted a report on the subject submitted by the Council on Medical Service, reading in part as follows:

(Text of Report)

"At the 1959 Clinical Session of the AMA House of Delegates in Dallas last December, twelve resolutions concerning physician-hospital relations were introduced. These resolutions in the main called for a reaffirmation of the Guides for the Conduct of Physicians in Relationships with

Institutions adopted by the House of Delegates in December, 1951 and since reaffirmed on several occasions.

"The 1951 Guides suggested the following general principles to individual physicians, component medical societies and constituent medical associations as a basis for adjusting controversies, pointing out, however, that they were to be qualified to the extent required by the applicability of one or more of the many factors mentioned in the body of the Guides:

"1. A physician should not dispose of his professional attainments or services to any hospital, corporation or lay body by whatever name called or however organized under terms or conditions which permit the sale of the services of that physician by such agency for a fee.

"2. Where a hospital is not selling the services of a physician, the financial arrangements if any between the hospital and the physician properly may be placed on any mutually satisfactory basis. This refers to the remuneration of a physician for teaching or research or charitable services or the like. Corporations or other lay bodies properly may provide such services and employ or otherwise engage doctors for these purposes.

"3. The practice of anesthesiology, pathology, physical medicine and radiology are an integral part of the practice of medicine in the same category as the practice of surgery, internal medicine or any other designated field of medicine.

(Study Authorized)

"These twelve resolutions as noted in the first paragraph, were referred to the Reference Committee on Insurance and Medical Service. It recommended that none of the resolutions be adopted but that the House of Delegates reaffirm the 1951 Guides as its policy on hospital-physician relations and that 'all subsequent or inconsistent actions be considered superseded.' The Reference Committee further recommended that the Council on Medical Service review this matter to ascertain if there have been actions inconsistent with the 1951 Guides and that the Council report its findings to the House at the earliest practical time. The

report to the Reference Committee was adopted.

(Report of 1953)

"The Committee on Medical Facilities of the Council on Medical Service has reviewed in detail the subject of physician-hospital relations with particular reference to official Association pronouncements in this field. It finds that in June, 1953, the House approved the Report of the Joint Committee on Hospital-Physician Relationships of the Boards of Trustees of the American Medical Association and the American Hospital Association. This report stated 'the right of an individual to develop the terms of his service on the basis of local conditions and needs is recognized, but such contractual arrangements should in all cases ensure (a) the operation of professional incentive for the physician, and (b) progressive development of the hospital departments involved, in order that increasingly improved services to patients may be rendered. Moreover, a physician shall not dispose of his professional attainments or services to any hospital, lay body, organization, group or individual by whatever name called or however organized, under terms of conditions which permit exploitation of the patient, the hospital or the physician.

(Letter from Judicial Council)

"In September, 1953 the Chairman of the Association's Judicial Council answered an inquiry regarding physician-hospital relations. The answer, based principally on an interpretation of the Principles of Medical Ethics, stated that it was not the sense or intent of the Principles 'to establish as ethical or to proscribe as unethical any particular financial arrangement—any term or condition—by which a physician disposes of his professional attainments or services.' . . . The letter also stated that the Principles of Medical Ethics 'proscribe not one, not the most flagrant but every act which permits the professional attainments and services of a physician to be exploited for the financial profit of any agency—for all such acts are detrimental to the welfare of the patient and the good of the profession.

(Reference in New Code of Ethics)

"In June 1957 the House of Delegates

adopted a revised edition of the Principles of Medical Ethics. The Reference Committee on Amendments to the Constitution and Bylaws, which considered the revised edition and recommended their adoption to the House, took special notice of the 1951 Guides and quoted at length from them in its report. It was recommended in the Reference Committee's report that the House accept and approve the 1957 edition of the principles and at the same time reaffirm the 1951 Guides. The 1957 edition of the Principles of Medical Ethics was adopted and the 1951 Guides were reaffirmed simultaneously."

The Month in Washington

(From the AMA Washington Office)

The seriousness of the national problem of mental illness was emphasized on three fronts recently in the nation's capital. First, the Joint Commission on Mental Illness and Health reported on a comprehensive five-year study of the overall problem. Second, another special government advisory committee recommended smaller community-sized mental institutions after a two-year study of facilities for care of the mentally ill. Third, a Senate subcommittee held hearings on the constitutional rights of mental patients.

The Joint Commission recommended sweeping reforms in the treatment of mental illness as well as expanded and improved facilities. It said some gains had been made in the past 10 years but that the need for adequate facilities for humane, healing treatment of the mentally ill is still largely unmet.

More than half of the patients in state mental hospitals do not receive any treatment, largely because of inadequate facilities, the commission said. The Commission recommended that government spending at all levels—federal, state and local—for public mental patient services be stepped-up in the next decade from the present \$1 billion a year to \$3 billion a year. Another recommendation was that there be a fully-staffed, full-time mental health clinic for each 50,000 of population.

The commission, which was created in 1955 by a special act of Congress, had 45 members representing every national asso-

ciation and non-government agency concerned with mental health. The American Psychiatric Association and the American Medical Association had the leadership in setting up the commission.

The government advisory committee, composed of 12 state Hill-Burton and mental health authorities, recommended that states concentrate on smaller community or regional facilities "offering a wide spectrum of services."

Dr. Luther L. Terry, Surgeon General of the Public Health Service, urged state governors to use the advisory committee's recommendations as guide-lines for improving mental health facilities.

The Senate Constitutional Rights Subcommittee heard from Dr. Winfred Overholser that there is no foundation to charges that many Americans are "railroaded" into mental hospitals. Dr. Overholser is superintendent of St. Elizabeths Hospital, large federal mental institution in Washington, D. C.

Dr. Lauren H. Smith, vice chairman of the AMA's Council on Mental Health, told the subcommittee that the AMA's future program in the field will include emphasis on more use of psychiatry in geriatrics, pediatrics and medical education, both at student and postgraduate levels.

Other activities planned for the AMA program include closer coordination of activities of the AMA council and corresponding committees of state medical societies.

★

The Food and Drug Administration, after the government filed suit against two drug firms for counterfeiting, reported that an extensive investigation showed that there is still relatively little counterfeiting of drugs.

Of 2,700 samples of drugs collected from 900 drugstores in the first three months of this year, only nine were found to be counterfeit.

FDA Commissioner George P. Larrick said he expected the problem of counterfeit drugs to continue because of the lure of easy profits. But he said results of the investigation supported the FDA view that "the facts to date do not warrant disturbing

sick people about the quality of medications that they have been taking."

In the counterfeiting suit, General Pharmacal Co., Hoboken, N. J., and Lowell Packing Co., Long Island, N. Y., and eight officials of the two firms were charged with manufacturing counterfeit tranquilizers, diuretics, weight reducers and other drugs and selling them to drugstores in six states. The Justice Department charged that the companies put markings on pills making them appear like other trade-marked brands.

★

FDA ordered manufacturers, effective May 27, to supply samples of new drugs for testing by the government agency prior to clearance for sale. In the past, the FDA has relied largely on scientific data supplied by the manufacturers themselves in clearing a new drug as being safe for sale. The FDA tested the drugs only on a limited and occasional basis and after they had been put on the market.

★

The government is spending \$4.1 billion a year in the health field, a Senate Government Operations Subcommittee reported. In the most detailed report of its kind ever published by a governmental group, the Subcommittee, headed by Sen. Hubert H. Humphrey (D., Minn.), noted that \$1.1 billion of the total cares for sick members of the armed forces and their dependents in hospitals. The tab for Civil Service workers' sick leave totals \$315 million a year. About \$650 million a year is spent on medical research, with most of this carried out by the National Institutes of Health and the Veterans Administration.

★

The government ordered 250 physicians drafted this year due to the failure of enough interns to sign up for military service. It is the first physicians draft in four years. All of the draftees will be assigned to the Air Force. A department spokesman said the draft call would not prevent individual physicians finishing internship this year from volunteering for Air Force medical duty.

MEDICAL NEWS IN TENNESSEE

Hill-Burton Projects in Tennessee

The Department of HEW reports that as of January 31, 1961, the status of all Hill-Burton grants for Tennessee are as follows: Parkview Hospital, Dyersburg—34 additional beds to be added at an estimated cost of \$388,400.

Warren County Hospital at McMinnville, 54 additional beds at an estimated cost of \$1,000,000.

Projects completed and in operation number 123 at a total cost of \$85,785,598.00 including federal contribution of \$32,928,925.00 and supplying 4,403 additional beds.

Under construction are 32 projects at a total cost of \$30,810,233.00 including a federal contribution of \$14,127,280.00 and designed to supply 1,417 additional beds.

Approved, but not yet under construction (including above), are 9 projects at a total cost of \$5,081,039.00 including \$2,084,541.00 federal contribution and designed to supply 205 additional beds.

Medical World News Editor Speaks In Memphis

Dr. Morris Fishbein, editor of Medical World News, spoke on the subject "Fifty Years of Medical Progress" before the Memphis Executives Club at the Peabody Hotel on March 30th.

Cardiac Nursing Parley Conducted In Nashville

An all-day cardiac nursing conference was conducted at the Baptist Hospital in Nashville, with Dr. F. Tremaine Billings giving the principal address. The meeting was sponsored by the Middle Tennessee Heart Association in cooperation with the North Central Tennessee League for Nursing. Dr. Billings discussed "Medical Aspects of Coronary Artery Disease." The meeting was held on March 30th.

Oak Ridge Medical Seminar

Eighteen medical doctors have completed the Seventh preclinical seminar at ORINS Medical Division. The seminar was held during the week of March 27th. Physicians

from throughout the nation attended the seminar.

State Has Trouble Hiring Pathologist

State Health Commissioner, Dr. R. H. Hutcheson, states that he is having trouble finding a physician to head the Health Department's newly authorized postmortem examination division as chief medical examiner.

He said he wishes a pathologist for the position, which will pay \$13,740 a year at the beginning.

The postmortem examination division was authorized by a 1961 legislative act which also set up procedures for naming medical examiners in all but two Tennessee counties. Davidson and Marion Counties were exempted.

Dr. Hutcheson stated that the new division will begin operation July 1 regardless of whether a staff has been hired by that date.

Health Center Dedication

Dr. R. H. Hutcheson, State Health Commissioner, was the principal speaker at ceremonies dedicating the new city-county health center in Chattanooga. The dedication occurred on April 16th.

University of Tennessee College of Medicine

Dr. Guy T. Barry, professor of research and bacteriology at University of Tennessee Memorial Research Center in Knoxville has been invited to present a seminar to the staff of National Institutes of Health in Bethesda, Maryland.

★

Dr. Cyrus C. Erickson, professor of pathology, moderated a joint session of member societies of the Federation of American Societies for Experimental Biology recently in Atlantic City.

★

The University of Tennessee Medical Units observed "Student Health Career Day" on April 14th with selected students from 98 high schools from 19 West Tennessee counties attending.

★

A postgraduate course for doctors in anesthesia was recently presented at the John Gaston Hospital. Guest lecturers included

Dr. Charles M. Barbour of Hartford Hospital, Hartford, Connecticut and Dr. Evan L. Frederickson, University of Kansas Medical Center, Kansas City.

★

Dr. Leo G. Horan, New Orleans, has joined the staff as an associate professor in medicine.

★

The College of Medicine has been awarded \$10,000 by the Rockefeller Foundation as continuing support for a collaborative program of teaching and research in physiologic sciences.

★

Dr. Eleanor Humphreys Grandjean, assistant professor of pathology, died on March 22nd at age 29.

Vanderbilt University School of Medicine

The Vanderbilt University School of Medicine has announced the appointment of Dr. Robert W. Noyes of the Stanford University School of Medicine, as professor and head of the department of obstetrics and gynecology. Dr. Noyes, now associate professor at Stanford University, will assume his new duties on October 1. He succeeds Dr. Frank E. Whitacre, who resigned recently to become chief of obstetrics and gynecology at Nashville General Hospital.

PERSONAL NEWS

Dr. George E. Murray, Knoxville, has been certified as a diplomate by the American Board of Urology.

Dr. Abner Glover, Jr., Knoxville, recently discussed the subject "Cancer" at the Tennessee Nurses Association district meeting.

Dr. Clarence Shaw, Chattanooga, spoke on the subject "Skin Deep Facts and Fancies," at a meeting of the B'north Sholom Sisterhood.

Dr. Alfred D. Mason, Memphis, has been installed as President of the Southeastern Section of the American Urological Association.

Dr. Matthew Walker, Nashville, recently addressed the members of the Providence Elementary School PTA.

A guest speaker before the North Side Kiwanis Club at Knoxville, was Dr. John Burkhart who spoke on the subject "Your Heart."

Dr. Maxwell Ernest Huff, Oneida, is now associated with the Thompson-Leeds Clinic in Oneida.

Dr. C. W. Kimsey, Dr. John Paul Carter and

Dr. W. R. Fowler, all of Chattanooga, recently participated as speakers on a panel at the meeting of the Brainerd Kiwanis Club in Chattanooga.

Dr. McChesney Goodall, Knoxville, has been named a director of the Knoxville Chamber of Commerce.

Dr. Amos Christie, Nashville, was the key speaker at a recent meeting of the staffs of Erlanger and Children's hospitals in Chattanooga.

Dr. James G. Hughes, Memphis, gave the first Samuel D. Edelman Lecture at the Ohio State University College of Medicine, Columbus.

Dr. Ralph R. Braund, Memphis, was the recent speaker to the Chester County citizens in Henderson.

Dr. Robert D. Jones, Jr., Dyersburg, has become associated with Dr. P. B. Widdis in his clinic at Newbern.

Dr. John S. Burell is now associated with Dr. John C. Pryse in the practice of medicine and surgery in LaFollette.

Dr. Harwell Wilson, Memphis, gave the Elkin Memorial Lecture at Emory University in Atlanta.

Dr. Howell H. Sherrod, Johnson City, has been elected president of the Tennessee State Orthopedic Society. Other officers are Dr. Merritt B. Shobe, Kingsport, vice president; and Dr. Robert Strang, Kingsport, secretary-treasurer.

Dr. George K. Henshall, Chattanooga, recently was the guest speaker before the Occupational Health Nurses of the Chattanooga area.

Dr. Laurence Grossman, Nashville, recently participated in discussions on "Medical Care for the Aged" before the Adult Cultural Committee of the Jewish Community Center in Nashville, and also on a panel discussing the same subject before the Senior Citizens Center in Nashville.

Dr. Samuel Binder, Chattanooga, recently addressed the Chattanooga Society of X-Ray Technicians.

Dr. D. L. Brint, Bolivar, is the new president of the Rotary Club of Bolivar.

Dr. R. H. Kampmeier, Nashville, gave the Sydenstricker Lecture at the University of Georgia Medical School, Augusta.

Dr. E. Converse Peirce, II, Knoxville, addressed the Medical Assistants Society on the subject "Open Heart Surgery."

Dr. Alex Carabia, formerly of Huntington, West Virginia, has been appointed pathologist and director of laboratories at the Oak Ridge Hospital.

Dr. Edwin F. Chobot, Jr., Chattanooga, recently addressed the Chattanooga Kiwanis Club.

Dr. Joseph C. Mobley, Memphis, has been elected to a high office in the Masonic Order. He is the most illustrious grand master of the Grand Council of the Royal and Select Masters of Tennessee.

Dr. Harmon L. Monroe, Erwin, recently spoke at the meeting of the Bristol Association of Life Underwriters. Dr. Monroe has also addressed the Upper East Tennessee Public Health Workers Association, at Johnson City.

Dr. G. Daniel Copeland, Memphis, has been se-

lected for an award by the John and Mary R. Markle Foundation.

Dr. Louis Rosenfeld, Nashville, has been named Chairman of the June reunions of Vanderbilt School of Medicine alumni.

Dr. Stanley D. Wheeler, Chattanooga, has returned to that city and is acting medical director of the Wildwood Sanitarium and Hospital.

Dr. Alvin J. Ingram, Memphis, was a recent guest speaker at the meeting of the Visiting Nurses Association. His subject was "Post Hospital Care in the Home."

Dr. Dillard Sholes, Elizabethton, has been elected president of the Carter County Unit of the American Cancer Society.

Dr. George Livermore, Jr., Memphis, was a recent guest speaker before the Woman's Auxiliary to the Memphis and Shelby County Medical Society.

Dr. Bruce B. Bellomy, Knoxville, has been appointed director of pathology and laboratories at Presbyterian Hospital.

Dr. Charles L. Suggs and **Dr. Gus J. Vlasis**, Chattanooga, were recent participants on a radio and TV program in Chattanooga sponsored by the Chattanooga-Hamilton County Health Council.

Dr. Glenn E. Horton, Memphis, has been recently elected to Associate Fellowship of the American College of Allergy.

ANNOUNCEMENTS

Ophthalmology and Otolaryngology Section of Southern Medical Association

The section of Ophthalmology and Otolaryngology of the Southern Medical Association announces that they are now accepting papers by physicians of either specialty living in the area of the Southern Medical Association for consideration for presentation at the next annual meeting to be held in Dallas, Texas, from November 6-9, 1961. The paper or an abstract of the paper may be sent directly to the Secretary, Dr. Albert C. Esposito, Suite 1212, First Huntington National Bank Building, Huntington, West Virginia.

Postgraduate Day in Radiology at Vanderbilt University School of Medicine

The Department of Radiology is offering a one-day course on Thursday, June 8, to be held at Vanderbilt University Hospital, beginning at 9 a.m., on the topic "Troubleshooting Your X-ray Problems." Subjects to be covered will include radiation safety, film processing problems, problems of specific interest to the orthopedist, and "troubleshooting" x-ray problems in neurosurgical conditions. Special consideration will be given x-ray problems dealing with the chest and gastrointestinal tract as well as pediatrics.

The course is approved for 7 hours of Category I credit by the American Academy of General

Practice. Tuition is \$15.00, which includes the luncheon. For further information address the Department of Postgraduate Instruction, Vanderbilt University School of Medicine, Nashville.

Physicians Recently Licensed in Tennessee

McKinney, Garland Y., Jr., Clarksville
King, David G., Memphis
Burrell, John S., Knoxville
Beavers, Aaron L., Jr., Memphis
Forsythe, John T., Tulsa, Okla.
Holman, Richard E., Richmond, Va.
Hunt, Kenneth D., Nashville
Morris, George A., III, Sheffield, Ala.
Caffey, Shed H., Memphis
Holliday, Thomas L., Memphis
Crowder, Virgil H., Jr., Lawrenceburg
Magee, James B., Bristol
Koenig, Marshall G., Nashville
Lipsett, Marie F., Greenville
Ratton, Robert W., Memphis
Swafford, Owen, Jr., Memphis
Dimitri, Elia C., Johnson City

The AMA's "World's Fair" of Medicine—New York

The American Medical Association's 110th annual meeting, the "world's fair of medicine," will bring an estimated 50,000 persons, including 25,000 physicians, into New York City, June 25-30.

The five-day convention, biggest of its kind in the world, will have as its theme: "Teamwork in Medicine."

The 1961 meeting will mark the eighth time that the A.M.A. has met in New York. The last convention there was in 1957 when 23,888 physicians registered.

Technical exhibits, numbering 827, and more than 350 scientific exhibits largely developed, designed, and manned by physicians reporting their research, will take up practically every inch of New York's big Coliseum.

The AMA meeting will open formally on Sunday, June 25, with a special preview luncheon and showing in the Coliseum for AMA officers and committee chairmen, members of the Board of Trustees, representatives of the Pharmaceutical Manufacturers' Association, and invited guests. Registration hours, Monday through Thursday, will be from 8:30 a.m. to 5:30 p.m. and until 12 noon on Friday, the final day.

Doctor Leonard W. Larson, 63-year-old pathologist and clinic executive from Bismarck, North Dakota, will be inaugurated as president of the AMA at 8:30 p.m. Tuesday, in the Waldorf-Astoria ballroom. Doctor Larson, who will give his inaugural address at that time, succeeds Doctor E. Vincent Askey, Los Angeles surgeon. A reception and ball will be held afterwards.

More than 2,000 physicians will take part in the AMA scientific program, which is designed to keep doctors abreast of what's new in medicine.

Teaching mediums will include lectures, sym-

posiums, panel discussions, movies, and closed-circuit television.

More than 300 physicians will deliver lectures before 20 different section meetings. Each section represents a specialty in medicine. The section meetings, which run simultaneously, will be held not only in the Coliseum, but also in hotels nearby; the Essex House, Barbizon Plaza, the Plaza, Henry Hudson, and the Sheraton-Park.

A highlight of the scientific program will be a one-day meeting on Monday, sponsored jointly by the AMA and the American College of Chest Physicians. This program will consist of symposiums, panel discussions, reading of scientific papers, roundtable luncheon meetings, and "fire-side conferences" where physicians gather to discuss medical problems of the chest informally.

On Tuesday, the AMA will sponsor for the first time a Research Forum. Participants will represent a cross-section of every medical specialty. The Forum program, representing six different sessions with more than 200 participants, also will be held on Wednesday and Thursday.

The AMA Section on Otolaryngology will sponsor courses on surgery of the ear, the nose and sinuses, and the throat for the visiting doctors. The program will be repeated three times on Thursday with attendance at each session limited to 50.

High blood pressure due to kidney diseases will be the topic of a combined meeting of five AMA sections: general practice, urology, general surgery, internal medicine, and pathology and physiology. This program will be held in the Coliseum on Wednesday morning, and a similar program dealing with diseases of the colon will be held in the afternoon. This meeting, which is also sponsored by five sections—preventive medicine, gastroenterology and proctology, radiology, pathology and physiology, and surgery—will close with a panel discussion by all participants.

The AMA Section on Surgery and the Section on Physical Medicine will hold a combined meeting with the American Rheumatism Association in the Coliseum on Thursday with an entirely

new program format. The program, dealing with rheumatoid arthritis will include a symposium, a lecture, a motion picture film, and "live" color television, sponsored by Smith, Kline & French Laboratories, Philadelphia. On the same day, the Section on Surgery will sponsor a television program showing the various new chemical treatments for cancer of the bowel.

Visiting physicians will be able to view and study the largest and most unusual collection of fresh tissues ever assembled at a medical meeting. All New York hospitals will contribute to this educational exhibit.

Motion pictures, a vital and important medium in the education of physicians, will play a big scientific role at the AMA meeting.

Ralph Creer, director of medical television and motion pictures of the AMA, said more than 50 films will be shown throughout the week. They will cover the newest developments in many branches of medicine. The U.S. International Medical Exhibit, a world-wide collection of outstanding medical films, will be featured.

The House of Delegates, the policy-making body of the AMA, will meet at the Statler-Hilton, the headquarters hotel, at 10 o'clock on Monday morning.

The House, patterned very much like the Congress of the United States, consists of 190 physicians from constituent or state medical societies, plus one delegate from each of the five government services, including the Army and Navy, and one delegate from each of the 20 scientific sections, a total of 215 members.

The Kentucky State Medical Association announces the following postgraduate courses to be given:

June 8, Pediatrics, Owensboro, Kentucky

June 15, Chest Diseases, Louisville, Kentucky

July 13, Medicine, Harrodsburg, Kentucky

For further information address the Postgraduate Medical Education Office, 104 W. Chestnut Street, Louisville 2, Kentucky.

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Medical Director

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PLACEMENT SERVICE

The Placement Service of the Tennessee State Medical Association is designed to assist doctors and communities to get together. Further information and contacts to both physicians and communities are available from the Public Service Office, 112 Louise Avenue, Nashville 5, Tennessee.

Locations Wanted

A 31 year old married physician desires clinical practice in general surgery in Tennessee community of 25,000 or over. Tennessee license; residency. Catholic. Graduate University of Tennessee. Available immediately. LW-372

A 26 year old single general practitioner desires to locate in middle or west Tennessee community of 5,000-10,000. Will consider clinical practice. Methodist. Graduate University of Tennessee Medical School. Available August 1961. LW-386

A 30 year old married physician would like to establish general practice, either clinical, assistant, associate or industrial in middle Tennessee community. Tennessee license. Church of Christ. Graduate University of Tennessee School of Medicine. Available immediately. LW-391

A 32 year old married physician wishes to establish general practice in west Tennessee community of 7,000-40,000. Methodist. Graduate University of Mississippi School of Medicine. Available immediately. LW-393

A 30 year old married physician desires to establish practice in internal medicine in west or middle Tennessee community 65,000 or over. Will consider either clinical, assistant or associate practice. Catholic. Graduate University of Cincinnati School of Medicine. Certificate Part I American Board of Internal Medicine. Available July 1961. LW-394

A 30 year old married physician would like clinical or associate general practice in east or middle Tennessee community 15,000 or over. Tennessee license; residency; surgery training. Methodist. Graduate University of Tennessee School of Medicine. Available July 1, 1961. LW-398

A 33 year old married general practitioner wishes to enter clinical, associate or assistant practice with other physician, in middle Tennessee community of 5,000-20,000. Residency training. Protestant. Graduate University of Tennessee School of Medicine. Available immediately. LW-400

A 32 year old married general practitioner with interest in obstetrics, would like industrial, associate or assistant practice in middle Tennessee community of 50,000 or over. Baptist. Graduate University of Louisville School of Medicine. Available with few weeks notice. LW-401

A 32 year old married physician would like to be associated in general surgery practice either clinical, assistant or associate in middle or west Tennessee community 10,000 or over. Residency

training. Certified American Board of Surgery. Protestant. Graduate St. Louis University School of Medicine. Available July 1961. LW-406

A 37 year old married physician would like to establish clinical, assistant or associate practice in radiology in east Tennessee community 40,000-100,000. General diagnostic and therapy and isotopes training. Residency. Board certified Radiology Approved Isotopes. Presbyterian. Graduate University of Tennessee School of Medicine. Available July 1961. LW-407

Physicians Wanted

Physician in west Tennessee town 500,000 desires an associate, age 28-35, for internal medicine practice. Office space and some equipment provided. PW-126

Physician in east Tennessee town 30,000 desires associate in general practice and some surgical training desired. Office space and some equipment provided. PW-127

Physician in east Tennessee community of 6,000 wishes an associate in general practice. Age 25-35, with one year internship. New, private office; examining rooms and equipment available. Hospital located in community. PW-134

Southern Tennessee community of slightly over 500 in need of general practitioner. (Trade area larger.) No other physician in community. Office space and some equipment available. PW-147

Physician in west Tennessee town of 500,000 desires an associate general practitioner. Completely furnished office available. PW-148

East Tennessee community of 1,000 (trade area larger) would like a general practitioner to assist one other doctor in community. Office space and equipment will be provided to suit physician. Forty bed hospital located in community. Excellent location. PW-149

Otolaryngologist, or ear, nose and throat physician, to purchase practice of physician who is re-entering government service. Minimum amount of cash required of right party. PW-152

Large clinic in middle Tennessee town of 400,000 in need of general practitioner, with residency training. Excellent location, good working conditions, and congenial group. PW-156

Physician in mid-eastern Tennessee town of 7,000 wishes to find physician to assume on a temporary basis (one or two years) the handling of his practice. Rental basis for office and equipment. Physician is entering residency training. Excellent opportunity. PW-157

A physician with experience in general practice with interest in OB and/or surgery, needed in middle Tennessee town of 6,000. Eighteen bed hospital facilities available. Will furnish office space, utilities and telephone. Age 30-45. Either associate or assistant status. PW-158

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No. 6

Abstract of the Proceedings of the House of Delegates of the Tennessee State Medical Association Chattanooga, April 9-11, 1961

The House of Delegates of the Tennessee State Medical Association, meeting at the Read House, Chattanooga, Tennessee on April 9 and 11, 1961, in conjunction with the 126th Annual Meeting of the Association, convened at 1:05 p.m., with Dr. Joseph W. Johnson, Jr., Speaker of the House of Delegates, presiding.

The invocation was rendered by Dr. John H. Burkhart, Knoxville, delegate from the Knoxville Academy of Medicine.

DR. BURKHART: "Almighty God, Thou who art the creator of all, Father of all, Lord of all, we acknowledge our debt to Thee and express our gratitude for Thy love, patience, mercy and generosity. We who have heard Thy call to extend also these qualities of love, patience, mercy and generosity to our fellow men through the ministry of our profession, seek Thy blessing, guidance and inspiration. As this House of Delegates convenes to deliberate the ways and means whereby our society can best serve those whom it exists to serve, wilt Thou impress our minds, clarify our thoughts and direct our actions toward the greater glory of God and the greater devotion of medicine to the high purpose to which Thou hast called it. And when we leave here, when our meeting has been concluded, may we have the feeling that we have been refreshed by our fellowship, enriched by new knowledge and renewed by rededication. Watch over those whom we have left at home, watch over us who are away from home and grant us the peace that comes only from the sure knowledge that Thou art the only constant unchangeable and eternal force which has always been and will always be in command of our lives, our destiny and our universe. Amen."

Dr. E. L. Caudill, Jr., Elizabethton, Chairman of the Credentials Committee reported a quorum present.

The Speaker announced that the Minutes of the last regular session were reproduced in the June, 1960, issue of the JOURNAL of TSMA and requested that a motion be presented to approve the proceedings as published. A motion was made by Dr. William A. Garrott, Cleveland, and duly seconded that the minutes of the regular session for 1960 be approved as published in the June, 1960, issue of the JOURNAL. **The motion was put to a vote and adopted.**

Committee on Credentials

E. L. Caudill, Jr., Elizabethton, Chairman
Julian K. Welch, Jr., Brownsville
J. Harvill Hite, Pulaski

Committee on Amendments to the Constitution and By-Laws

Laurence A. Grossman, Nashville, Chairman
Wm. T. Satterfield, Memphis
Carl A. Hartung, Chattanooga

Committee on Resolutions

Alvin J. Ingram, Memphis, Chairman
Harmon L. Monroe, Erwin
Robert N. Buchanan, Jr., Nashville

Committee on Reports of Officers

Jas. N. Thomasson, Nashville, Chairman
Jack Chesney, Knoxville
Byron O. Garner, Union City

Committee on Reports of Standing Committees

George K. Henshall, Chattanooga, Chairman
C. D. Hawkes, Memphis
George L. Smith, Winchester

Committee on Reports of Special Committees

H. P. Clemmer, Milan, Chairman
Wm. A. Garrott, Cleveland
Robert M. Foote, Nashville

Committee on Outstanding Physician of the Year Award

J. Paul Baird, Dyersburg, Chairman
Jas. C. Gardner, Nashville
Harmon L. Monroe, Erwin

Petitions to Charter Medical Societies

The Speaker announced that the House would receive petitions from county societies seeking charters. Dr. Roscoe C. Pryse, LaFollette, representing the Campbell County Medical Society arose for the purpose of requesting the House to charter a new society.

The Anderson-Campbell County Medical Society's Charter was relinquished and a petition presented to the House by Dr. Pryse to form the Campbell County Medical Society. The petition was found to be in order. The petition was approved by the Councilor from the Second Councilor District.

Dr. Pryse moved that the Campbell County Society be chartered, it was seconded by Dr. Raulston and approved by the House of Delegates—and the Campbell County Medical Society was officially chartered as a component society of the Tennessee State Medical Association. A charter was presented to Dr. Pryse. The House approved the delegates from the Campbell County Medical Society.

Introduction of Amendments

Speaker Johnson called for the introduction of any proposed amendments to the Constitution. There being none, he called for introduction of amendments to the By-Laws.

Amendment No. 1 to the By-Laws which would amend Chapter V, Section 2, under the general heading of "Election of Officers," proposed to eliminate the language contained in this Section 2 and substitute a new definition for the method of naming a Nominating Committee. **COMPLETE CONTENTS OF AMENDMENT NO. 1 ARE FOUND ON PAGE 197 IN THIS ISSUE OF THE JOURNAL.**

Amendment No. 2 to the By-Laws would amend Chapter VIII, Section 3, by eliminating the first sentence in Section 3 and substituting language which would re-define the composition of the Committee on Public Policy and Legislation. **CONTENTS OF AMENDMENT NO. 2 ARE ON PAGE 198 IN THIS ISSUE OF THE JOURNAL.**

These amendments were referred to the Reference Committee on Amendments to the Constitution and By-Laws.

Introduction of Resolutions

COMPLETE RESOLUTIONS AS ADOPTED BY THE HOUSE APPEAR ON PAGE 199.

The Speaker stated that the next business before the House was the introduction of Resolutions. Delegates were directed not to discuss or debate the resolutions at the time of introduction, but read them only in order that the Speaker could get the resolutions before the proper reference committee. The Speaker pointed out that those persons interested in resolutions introduced should appear before the Reference Committee on Resolutions to express their views. It was stated that opportunity would be given for debate and discussion when the resolutions were reported to the House by the Reference Committee on Resolutions on Tuesday, April 11.

Resolution No. 1:

Subject: Opposition to Medical Legislation for Health Care Under Social Security.

This resolution was presented by Dr. Chas. C. Trabue, Nashville, and it set forth pertinent reasons why the Tennessee State Medical Association should oppose the "King Bill" (HR 4222) and the "Anderson Bill" (S 909) which calls for health care of aged citizens under the social security system.

Resolution No. 2:

Subject: Service Plan of Health Insurance for Persons 65 Years of Age and Older in Tennessee.

The resolution presented by Dr. James A. Kirtley, Jr., Nashville, set forth reasons and recommendations of the Prepaid Health Insurance Committee to establish a Senior Citizens Policy of Health Insurance for

Aged Persons in Tennessee. The basic fee schedule called for a 25% reduction in the schedule of the existing Tennessee Plan. The resolution requested permission of the House for the Prepaid Insurance Committee to establish such a Senior Citizens Plan of Health Insurance.

Resolution No. 3:

Subject: Extension of the Tennessee Plan to Provide for a "Plan B" of Service Benefits to Persons in Higher Income Levels.

Presented by Dr. James A. Kirtley, the resolution set forth the reasons and thinking of the Prepaid Health Insurance Committee and proposed extending service benefits to persons in higher income limits. The resolution called for a fee schedule with a maximum of \$450.00 and proposed that the plan offer service benefits to persons, unmarried, and earning not more than \$4,000 per year; and to married persons with families who earned not more than \$7,500 per year. The resolution requested the House to approve the recommendation and give the Prepaid Health Insurance Committee authority to proceed with the formation of an adequate schedule of procedures and fees.

Resolution No. 4:

Subject: Method for Increasing Physician Participation in Tennessee Plan.

Presented by Dr. Kirtley, this resolution set forth the fact that participation by physicians in the Tennessee Plan is decreasing and that necessary steps should be taken immediately to remedy this problem. The resolution called for appropriate committees to be appointed in each county medical society for the purpose of obtaining physicians as participants in the existing Tennessee Plan. The resolution quoted the language contained in the "Participating Physician Agreement Form" and the county society committees were urged to be put into operation immediately for the purpose of building up the participation of Tennessee physicians in the plan.

Resolution No. 5:

Subject: The Support by the Association of Training in Hypnosis Only In Responsible Teaching Institutions.

The resolution introduced by Dr. Frank H. Luton, Nashville, went into considerable detail concerning the significant place in medical practice for hypnosis and hypnotic techniques. It was resolved that all members of the Association be urged to refrain from support of the various special courses being offered by individuals and organizations not related to responsible teaching institutions. It further resolved that the membership support the development of adequate training programs at the postgraduate level for general physicians and non-psychiatric specialists who wished to develop competence in the use of hypnosis.

Resolution No. 6:

Subject: AMA Dues

Introduced by Dr. Daugh W. Smith, Nashville, this resolution set forth all information concerning the proposed increase in the annual dues of members of the American Medical Association. The resolution was presented for the purpose of guiding AMA delegates from Tennessee as to the support that should be given this proposed increase and to instruct the delegates as to how they should vote on this matter.

Resolution No. 7:

Subject: Request for the AMA to Establish a Commission on the Relationship of Medicine to Optometry.

The resolution introduced by Dr. Ralph O. Rychener, Memphis, reviewed action of the AMA House of Delegates and resolution No. 31 of the AMA House calling for the establishment of a Commission to Study the Relationship of Medicine to Optometry. The resolution further outlined the various steps and actions taken by the AMA House on this subject. The resolution called for the AMA to establish a Commission on the Relationship of Medicine to Optometry and further that the Commission should conduct a broad study from the standpoint of public interest and the problems involved in the present relationship of medicine to optometry and further to explore all possible and desirable solutions to these problems. The delegates from Tennessee to the House of Delegates of the AMA were instructed to introduce this resolution at the AMA in June at New York.

Resolution No. 8:

Subject: Procedure in the Selection of the Outstanding Physician of the Year.

Presented by Dr. J. Paul Baird, Dyersburg, this resolution set forth specific recommendations by the Reference Committee for the selection of the Outstanding Physician of the Year from Tennessee. (1) The resolution called for a component society offering a candidate for the Outstanding Physician Award to prepare a brochure to be submitted to the Executive Director not later than February 15th, prior to the annual meeting; (2) that the Executive Director turn the brochures over to the Special Reference Committee for study; (3) that the Reference Committee be composed and function in the same manner as formerly to select three of the candidates whose sponsor shall be given the opportunity of a nominating speech of five minutes in behalf of his candidate before the House of Delegates.

Resolution No. 9:

Subject: A Request for TSMA Endorsement of the Public Education and Information Program of the American Cancer Society, Tennessee Division.

Resolution No. 9 by Dr. Ralph H. Monger, Knoxville, set forth the activity and progress made by the Tennessee Division of the American Cancer Society in its public education and information program. The resolution pointed out that 50% of the professional members of the Cancer Society's Board of Directors were composed of physicians. The resolution requested that the Tennessee State Medical Association formally endorse the aims and purposes of the public education and information program and recommend the same to its component societies and urge individual members to give counsel and leadership to the effective acceleration of these aims and objectives.

Resolution No. 10:

Subject: Nursing, Convalescent and/or Custodial Care Facilities for Older Age Groups.

The resolution presented by Dr. Daugh W. Smith, Nashville, expressed the growing need for nursing, custodial, convalescent and chronic illness care facilities for older age groups and pointed out the demonstrated suitability of church groups and re-

ligious organizations for establishing this type of facility on a tax-free basis, and further that the TSMA favored non-governmental operation and control of such facilities. It resolved that the Board of Trustees of TSMA appoint a study committee to explore the feasibility of such facilities on a statewide basis, with the cooperation of the medical profession and further that the committee be instructed to submit a preliminary report and recommendations to the Board of Trustees within six months from the date that the resolution was presented.

Resolution No. 11:

Subject: Active Immunization Against Tetanus

Resolution No. 11 by Dr. Carl C. Gardner, Jr. of Columbia, set forth the serious conditions that could arise in regard to tetanus and pointed out that active immunization against tetanus is a highly effective and innocuous procedure producing immunity for years. It resolved that the House of Delegates have publicized by the State Association the fact that active immunization against tetanus is a highly effective and desirable procedure. It was directed that the TSMA delegates to the AMA House of Delegates present a resolution to this effect at the next meeting of the AMA in New York with the concept that encouragement of such immunization would be an outstanding public service to the citizenry of the nation.

The above resolutions were referred to the Reference Committee on Resolutions.

The Speaker called for additional resolutions and since there were none, the House moved to the next order of business.

Reports of Officers

The Speaker announced that the next order of business of the House would be to hear the reports of officers.

Report of the President

RALPH O. RYCHENER, M.D.

The report of the President outlined the pertinent events of progress of the Association during the preceding year. It was pointed out that the Presidency of the Association no longer should be considered as an award for services rendered in the past. The business of the Association has grown

in basic importance, complexity and volume as to require a major portion of the time, thoughts and efforts of an interested and intelligent physician. The report pointed out the necessity of the President having served in positions of importance on the Board of Trustees, Executive Committee, Legislative and other similar important committees, for only with the background of knowledge obtained in the crucible of the inner-most activities of the Association can one be prepared for the multitude of unusual questions which he must attempt to answer from the moment of his election to the office of President.

The report stated that the major problem that TSMA had been involved with had been in the field of legislation, particularly pertaining to care of aged citizens. An outline of the January White House Conference on Aging was reviewed, together with the many and varied activities involved with national legislation.

Special recognition was paid to physicians whose leadership and knowledge helped to guide the deliberations and shape the recommendations of the Tennessee delegates to the White House Conference on Aging. The report further called attention to the magnitude of the legislative efforts presented by TSMA during the past year. A complete outline and discussion of Public Law 86-778, the Kerr-Mills law was presented in the report, as well as the part played by the Tennessee State Medical Association. Organization of the key contact physicians in the counties throughout the state was reviewed. The report dealt with the work of the Board of Trustees and the Executive Committee.

The President's report further commented upon the outstanding work performed by the various committees of the Association during the year. A review of the regional legislative conference conducted in French Lick, Indiana, was rendered in the report.

The report concluded by warning members of the Association to be ever alert to the increasing demands that physicians in Tennessee must be prepared to meet. "The population of Tennessee is growing and the economics of our time cause rapid changes in the economy. Planning for the future is going to be one of the major pieces of work

of the Board of Trustees and of our committees involved with these studies." The President pointed out the cost of medical care is a paramount issue before the public and this problem must be solved by organized medicine or else it will be determined by Government.

The President expressed his appreciation to the various committees, officers, the Board and members at large, and to the staff of the Association, for their assistance in aiding him in the conduct of his office.

Report of the Secretary-Editor

R. H. KAMPMEIER, M.D.

"Though the pages devoted to advertising in the JOURNAL of the Tennessee State Medical Association have maintained a high level for most of the year, the last months of the year reflected a drop in advertising, which has been felt by the Journals on a nationwide basis. During 1959, the total pages devoted to advertising were 918. In 1960 they were 863. The pages devoted to text (non advertising) in 1960 were 542, as against 524 pages in 1959. The ratio of advertising to pages of text has been maintained as in the past at about a 60:40 ratio.

"The Executive Director and his staff, the President on the President's page, and we dealing with the editorial section have tried throughout the year to inform the membership of the activities of the Board of Trustees, the House of Delegates, and special committees of the Association, in their many activities which should be of interest to the membership of the Association. An effort has been made in reporting these activities, to keep the membership informed of the many changes which are going on in the political, social and economic fields as they touch medicine. It is our firm intention to stress these aspects of the doctor's practice, since they are so important and essential for consideration as more and more fingers of government play a part in the medical care of our citizens. Those of us who see to the publication of the JOURNAL each month beg and hope for more attention on the part of the membership of the Association to learn what does go on by more careful perusal of the JOURNAL.

"The Editor wishes to again acknowledge the able assistance of Doctors Addison B.

Scoville, Jr. and Albert Weinstein as Assistant Editors."

Report of the Board of Trustees

W. O. VAUGHAN, M.D.

Chairman and Treasurer

The report stated that the Board had conducted four regular meetings in addition to special meetings necessary to administer the business of the Association.

The Chairman outlined the business transacted by the Board of Trustees at each of its regular meetings. This was done in abstract form for brevity and to streamline the report for members of the House. It was stated that regular meetings of the Board were conducted in April, July and October 1960 and January 1961. A special meeting of the Board was necessary on October 9th and November 7th in 1960. These were in addition to two meetings of the Executive Committee of the Board.

Matters of prime concern to the Board during the past year included legislative affairs, both at the national and state levels, the Medicare program, numerous administrative and public service activities, as well as the routine business of administration that the Board deals with each year. The report stated that the Board's activities in each of its meetings were published in the JOURNAL for the benefit of all members.

A step by step review of the important actions of the Board were presented in the report.

One of these included the recommendation for the Public Service committee, in conjunction with the Hamilton County Medical Society, to conduct a special breakfast during the annual meeting in Chattanooga for key community leaders and physicians who would be invited to hear important aspects of medical economics as pertaining to the State of Tennessee.

The Chairman of the Board recommended that all members of the House of Delegates carefully review the complete details and actions of the Board of Trustees as outlined in his report and which had been presented to all members of the House. Some of the major business of the Board included the following:

1. Appointment of a Research and Long-

Range Planning Committee of the Board.

2. Named delegates to the AMA National Congress on Prepaid Health Insurance.
3. Expanded the Liaison Committee to the Department of Public Welfare.
4. Approved \$2,500 to be made available to the Consultative Committee on the Administration of Voluntary Prepaid Medical Care Plans to study abuses in prepaid insurance plans in Tennessee.
5. Studied the methods for naming a Nominating Committee of the Association and referred this matter to the Planning Committee for further study.
6. Approved the establishment of a "Key-man" system of physicians throughout the state as requested by the Legislative Committee.
7. Approved expenses involved with the business of TSMA's Council.
8. Appointed a Committee to serve as a study committee on the sterilization bill which had previously been tabled at a special session of the House of Delegates.
9. Heard and studied various reports concerning the formation of a Tennessee Health Council.
10. Participated actively with the Governor's Committee for recommending services and administrative procedures under the proposed Kerr-Mills Bill.
11. Approved a resolution presented to the Board for improved and added facilities in West Tennessee for the care of mentally defective infants, and adolescents.
12. Studied many reasons and problems involved with the lack of physician participation in the Tennessee Plan.
13. Urged large county medical societies to hold indoctrination and orientation meetings.

Report of the Treasurer

The Treasurer's report contained the official audit conducted at the close of December, 1960; the audit being made by Grannis and Associates, CPAs of Nashville. It was pointed out that TSMA received dues payments from 2,563 members, totaling \$64,000 for the year 1960. A decrease in advertising revenue was pointed out.

Income from the JOURNAL totaled \$50,956

for the year. This was a decrease of \$2,349.12 over the previous year. The decrease was primarily due to the Senate investigation conducted by Senator Kefauver's Committee.

The report pointed out that the budget for 1960 was \$117,650 established for the operation of the organizational, public service and postgraduate education departments. The Association operated within the budget. The Treasurer's report dealt with the increase in TSMA dues which became effective January 1, 1961, increasing the dues to \$40 per member.

The budget approved by the Board of Trustees for the fiscal year 1961 amounted to \$133,786. The budget for the committee on postgraduate education totaled \$17,900.

The Association's funds are used to provide services to the membership, salaries, programs of committees, maintaining the headquarters office properties, to publish the JOURNAL and operate the general business of the Association, to conduct existing and expanding legislative activities, to conduct the annual meeting which increases in cost requirements yearly due to rising cost of hotel and other services, national meetings, payment of expenses of delegates, reimbursement to the many committee members for travel on Association business, printing costs, postage, supplies, telephone and telegraph, attorney fees, official travel, and these are but a few of the expenditures used in the conduct of the Association's business.

The report concluded by stating that the Association's financial records are open for any member to examine and every member is welcome to inquire of the detailed financial activities. A copy of the 1960 certified public accountant's audit was attached and is a part of the report. Likewise, copies of the 1961 budget were included for inspection.

The Treasurer's report stated that at least one year's operating budget should be available as a reserve. For the first time, it was the opinion of the Treasurer that TSMA is now financially geared to do the job that is required for the foreseeable future. Changing conditions might alter these funds, however, TSMA is able now to conduct activities not previously possible due to financial reasons.

The report concluded by the Treasurer stating that the financial affairs of the Association were in sound condition.

Report of the Council

JOSEPH L. RAULSTON, M.D.

The Chairman of the Council stated that the past year had been an eventful one. For the first time, it had been necessary to conduct interim meetings of the Council to attend to urgent business. It was pointed out in the report that from this date, it would be policy for the Council to conduct one mid-year meeting to expedite the solution of problems that require disposition. The report stated that professional problems of misconduct had been disposed of at the local level during the past year. Only one expulsion from the Association for unethical conduct had occurred.

The report stated that the Council would request the House of Delegates to approve a resolution changing the boundaries of the present Councilor districts. The present boundaries correspond to the congressional districts at a time when Tennessee consisted of ten congressional districts rather than the present nine. The report pointed out the Council's pressing problem and requested assistance from the House concerning professional association of physicians with osteopaths and other non-medical groups. The contents of a letter dated August 25, 1960, addressed to all members of TSMA was discussed. Demands being made by osteopaths for staff membership in hospitals was included in the report. The code of ethics was reviewed wherein physicians are forbidden to consult with osteopaths.

In addition to the report rendered by the Chairman, a statistical report by councilor districts was appended with the report.

Report of Executive Director

MR. J. E. BALLENTINE

The report of the Executive Director was abstracted for conservation of time and convenience of members of the House. A copy of the abstracted report is as follows:

The report of the Executive Director is of necessity long and detailed. With the permission of the speaker and of the House, I should like to abstract it for the convenience of the delegates. The complete report

is enclosed in your folders, designated as Officers Report E. I hope that you will take the time to study it.

The report embodies a summarization of the activities and accomplishments of the Association during the past year. The business of the Association is progressively involved in expansion, intensification and acceleration.

The primary mission of the headquarters staff is to implement policies as set forth by the House of Delegates, the Board of Trustees, the Officers, the Committees and the Council, and to carry out their programs and work. It is the function of the headquarters staff to serve these groups with necessary information, studies, reports, records, and preparation of materials of all types. Staff members serve as secretary to all committees of the TSMA.

The record of accomplishment of TSMA's fourteen standing and sixteen special committees are noteworthy. The various reports to be presented here today represent a prodigious amount of work. The Association is becoming more mature and experienced in dealing with the many complex problems that are confronted.

The past year has been an active one in national issues before the Congress. A complicated and heated issue, our Medical Examiners Bill, was successfully passed in the 1961 Tennessee General Assembly, this bill being sponsored by TSMA.

The Executive staff continues to make every effort to service and establish good liaison with TSMA's fifty component societies and with the membership. Outstanding field work has been accomplished with candidates for the state legislature and in conducting the programs of TSMA.

Advocates of broad social reforms have seized upon the word "health" as a vehicle to transport many of their ideologies which gather some support and at the same time attempt to discredit the great achievements which have been made by medicine in the improvement of health. Your headquarters staff has and will continue to observe these many trends detrimental to medicine and act as a "watchtower" to keep physicians of Tennessee informed.

Your Association continues a steady growth in membership. You will find in the

report that the total membership of TSMA as of January 1, 1961, was 2,777. AMA members totaled 2,657. Each year shows a progressive growth in membership.

Full information concerning the JOURNAL, Finances, Medicare, Public Service Activities, the Tennessee Plan, problems involved with the annual meeting, official travel, and many others are some of the items covered in the report.

1960 saw the necessity of two special sessions of the House of Delegates due to the pressing problems and policy decisions that were required to be determined. Important conferences with top echelon executives in the state government and other agencies were conducted during the year on health matters.

The report of the Executive Director concludes by again bringing to the attention of the House certain recommendations of organization presented at the 1960 session.

This report is a general review of the aspects of work and activities of the Association in which the headquarters staff is engaged. I sincerely hope that you will examine my report closely.

At the conclusion of reports of officers, **all reports of Officers were referred to the Reference Committee on Reports of Officers.**

Reports of Committees

The Standing and Special Committees were given necessary time to make their reports where the committee chairman felt that additional time was indicated. The following committee reports were submitted:

Standing Committees

Report of the Committee on Scientific Work

R. H. KAMPMEIER, M.D., Chairman

As in the previous year, the Committee on Scientific Work acted in accordance with the current custom of providing a stipend for out-of-state speakers invited by the Specialty groups to appear on the general session of the scientific program of the Tennessee State Medical Association.

In the preparation of this program the following Committee had been appointed by the Board of Trustees in arranging for the guest speakers and the general program of the annual session. The special societies to which \$100 stipends were to be allotted

during the 1961 session were represented by the following appointments by the Board of Trustees:

Dr. Wendell W. Wilson, Old Hickory for General Practice

Dr. Baker Hubbard, Jackson for Surgery

Dr. George A. Mitchell, Chattanooga for Obstetrics

Dr. J. Sumpter Anderson, Nashville for Anesthesiology

Dr. Jean M. Hawkes, Memphis for Diabetes

Dr. J. W. Erwin, Blountville for Preventive Medicine

The members of the Committee from the profession at large were:

Doctors E. White Patton, Chattanooga

John H. Burkhardt, Knoxville

George R. Livermore, Jr., Memphis

Albert Weinstein—from the Editorial Board

Addison B. Scoville from the Editorial Board

It is hoped that the program for the annual session will prove to be both interesting and educational, and thus summarize the activities of the Committee.

Report of the Legislative and Public Policy Committee

CHAS. C. TRABUE, IV, M.D., Chairman

It was stated that the activities of the Legislative and Public Policy Committee had been extensive and diversified during the past year. Work had been divided into two main divisions, the legislative work at the state level and at the national level. The Chairman outlined the work involved with the presentation of the medical examiner bill before the General Assembly. The Chairman reviewed the work at the grass roots level throughout the state in order to get legislators at the county level informed about the bill. The report conveyed the methods used in organizing county contact doctors, selected in each county whose responsibility was to contact and get acquainted with, and attempt to be in a position to use his influence with the representatives from his county to the state legislature.

The report stated that it was of primary importance to get contacts made by physi-

cians in their home counties. Influence on legislators after they arrive in Nashville is not the answer to the problems confronting the Association. Complete details and steps taken in the promotion of the medical examiner bill were reviewed in the report. Work with county judges, attorney generals, and others throughout the state was revealed. Problems involved with the osteopaths and the undertakers were reported and the methods explained as to how these groups were dealt with.

The second phase of the report dealt with the efforts of the Legislative Committee on the National level. The report outlined steps taken in combatting the influence and passage of the Forand Bill. The manner in which physicians met and worked with Tennessee's Congressmen on the Ways and Means Committee was revealed. The Chairman reviewed two legislative conferences, one in French Lick, Indiana, and one in Chicago on national legislation and the details of these meetings were reported to the House. Since the original Forand Bill had been eliminated, a new bill on the same subject is now called the King-Anderson Bill and the contents of this bill were presented to the House.

The report concluded by the Chairman requesting every physician to attend the general meeting on Monday, April 10th to hear the President of the American Medical Association and the Assistant Executive Vice President speak further on the subject of medical care for the aged under social security.

Every physician was urged to familiarize himself with the issues and to accept his personal responsibility which he must discharge if we are to prevent enactment of legislation which constitutes the entering wedge for complete medical socialism in the United States.

Report of the Liaison Committee to the Public Health Department

C. D. HAWKES, M.D., Chairman

This report pointed out the problem that exists in regard to fees for services rendered to the crippled children's service by physicians in the state. The report stated that this matter now comes under the jurisdiction of the Public Health Council. The

report stated that the Committee recommended that TSMA cooperate with the Advisory Committee to the Crippled Children's Service, especially the Liaison Committee to the Public Health Department and to aid the Public Health Council in formulating a standard and equitable fee schedule for services rendered by TSMA to the Crippled Children's Service. The report stated that a minimum is necessary in order to make maximum use of the limited funds available to the Crippled Children's Service.

Report of the Committee on Insurance

B. F. BYRD, SR., M.D., Chairman

The report dealt with the various group insurance plans for members of TSMA.

SICK AND ACCIDENT PLAN: There are now 1,058 policies in force, a net increase of 110 for the year. There were 111 claims paid last year for total amount of about \$70,000. The plan is in a very healthy state and so far as we can see has been exceptionally well handled.

PROFESSIONAL LIABILITY PLAN: There are now a total of 689 doctors insured under the plan, a net increase of 60 during the year. There were 103 claims reported, 24 paid, 58 closed and 21 still pending. This plan is in a satisfactory state and we feel has been exceptionally well managed, however, we should like to see the enrollment increase.

MAJOR HOSPITALIZATION PLAN: About 450 doctors now participate in the plan. Mr. Burleigh and his associates have improved the facilities for solicitation of new members and adjustment of claims by selection of representatives in more than 20 additional areas of the state. Your committee would like very much to see a much larger enrollment. More than 90% of collected premiums were returned to insureds in payment of claims.

OVERHEAD EXPENSE PLAN: 208 policies now in force under the plan. Claims paid during the year exceeded \$10,000. Looks like a good investment for the doctors.

GROUP LIFE PLAN: Enrollment under this plan has increased about 24%. To your committee, it is encouraging that most of this increase is due to enrollment of the

younger men. The plan has now been in operation for about 18 months and it now appears that at our next annual meeting we will have very favorable report as to a dividend.

Report of Committee on Postgraduate Education

R. A. DAVIDSON, M.D., Chairman

(Presented by Harrison Shull, M.D.,
Nashville)

The report stated that it was the decision of the Committee to make the 1960 program varied in manner of presentation from that of previous years. The first series of programs presented during 1960 were of the symposium type and conducted in ten locations throughout the state. The subject was "Obstetrics and Birth Injuries." These sessions were attended by 145 physicians.

The report stated that the second program (summer series) was of the CPC type held in conjunction with the hospitals and with the local physicians taking part in presenting cases in the area with the consultant panel and the group broadening their discussion around the cases presented. The subject for this series of symposia was "Medical and Surgical Diagnostic and Therapeutic Problems." These sessions were conducted in ten locations with 134 physicians attending.

The third and final program (fall series) was entirely new in programming and location. It consisted of an all-day program entitled "Selected Topics in Internal Medicine," and presented at the University of Tennessee College of Medicine in Memphis; Vanderbilt University College of Medicine in Nashville; and the University of Tennessee Memorial Hospital and Research Center in Knoxville.

The faculties for the program were procured from the two medical schools and qualified physicians of the state.

The program for 1961 included a symposium type program on the subject "Some Aspects of Industrial Medicine for the Practicing Physician"; the second symposium, a CPC type entitled "Medical and Surgical Diagnostic and Therapeutic Problems"; and the third and final symposium (fall series) entitled "Surgery for the Specialists and General Practitioners."

Report of Memoirs Committee

HENRY L. DOUGLAS, M.D., Chairman

The Memoirs Committee reported that during the calendar year 1960, 61 members of the Association died. The names of the deceased physicians were read by the Chairman. Dr. Douglass read the following lines:

(Many years ago Rudyard Kipling had this to say about doctors:)

"Man dies too soon, beside his works half planned

His days are counted and reprieve is vain;
Who shall entreat with death to stay his hand

Or cloak the shameful nakedness of pain.
Send here the bold, the seekers of the way—

The passionless, the unshakeable of soul
Who serve the inmost mysteries of man's clay

And ask no more than leave to make them whole."

(The House stood in silent tribute to the deceased members.)

Report of Committee on Prepaid Health Insurance

JAS. A. KIRTLEY, JR., M.D., Chairman

Since the report of the Prepaid Health Insurance Committee was quite lengthy, the Chairman abstracted the highlights of the report. It was stated that the Committee met a number of times throughout the year with representatives of Blue Shield and the Health Insurance Council. Many of these exploratory discussions were conducted between representatives of the insurance carriers and the Executive Committee of the Prepaid Health Insurance Committee.

One of the primary interests of the Committee was to place in force a plan of care for the people over 65 years of age whose incomes are limited. It was felt that the physicians in Tennessee should go on record in favor of such a plan. This would take care of aged persons with a 25% reduction of the fees in the existing Tennessee Plan, provided that their income fell within the limits of the present Tennessee Plan, and that such patients had only one insurance policy.

The Chairman presented full information concerning a proposed "Plan B" presented

by the committee for a schedule of service benefits for persons in higher income levels. It was pointed out that the proposed "Plan B" would approximate a schedule with a \$450 maximum. It was stated that this was roughly one and one-half times the existing fee schedule of the present Tennessee Plan. The schedule would be arrived at by use of the unit value plan as used by other states and accepted nationally by underwriters.

It was stated that the committee believed that many people wanted more complete coverage and they were going to obtain it whether physicians presented it or the Federal Government. The Chairman quoted from letters presented to the Insurance Committee by officials of the Tennessee Farm Bureau Federation. The highlights of the letter pointed out the great support that the Farm Bureau had given to doctors and the further endorsement and backing of the Tennessee Plan. It was stated that the Farm Bureau was distressed about the fact that so few physicians out of the total number in the State are participating physicians in the Tennessee Plan. They urged greater participation.

The Chairman urged all members of the House of Delegates to carefully read the report of the Prepaid Insurance Committee which spelled out many of these matters in detail.

(MEDICARE)

It was stated that the Executive Subcommittee of the Prepaid Health Insurance Committee also served as the Committee on Medicare and therefore the report of the Medicare Committee was included as an addendum to the Prepaid Insurance Committee report.

The Chairman stated that the Executive Committee of the Prepaid Health Insurance Committee were advised that the Defense Department had asked for some 30 changes in the fee schedule and it was believed by the TSMA Committee that these changes could not be accepted. Finally, after negotiations, some of the suggestions for changes were accepted by the committee, however others were not. The matter was referred to the Board of Trustees and the Association's position was made known to the Defense Department regarding this matter.

Finally, a contract was negotiated with

but few changes and slight exceptions in the fee schedule. The committee recommended that the House of Delegates enable the Executive Committee of the Board of Trustees to have some leeway in negotiating a contract with the Department of Defense each year, and further that the Executive Committee be allowed to negotiate and obtain the best possible contract that could be arranged with the Department of Defense concerning the Medicare program.

Report of Committee on Cancer

RALPH H. MONGER, M.D., Chairman

The report outlined the activities of the committee for the year and reviewed the matters discussed at the committee meeting on February 26th.

One of the activities of the committee was to offer services to county medical societies stating that the committee was willing to conduct scientific programs. Interesting statistics were presented by Dr. Ralph Braund, a member of the committee.

The committee suggested that a recommendation should go to all county medical societies to cooperate with the American Cancer Society Unit in the locality year round to educate the lay people within their area.

The committee also recommended that certain areas in Tennessee should be contacted in regard to the feasibility of establishing additional tumor clinics. The report concluded with the statement that the committee had unanimously agreed to recommend to the Postgraduate Committee of TSMA that one program each year include some phase of cancer.

Report of the Advisory Committee to the State Department of Public Welfare

CARL A. HARTUNG, M.D., Chairman

The report stated that the committee had met with officials of the Department of Public Welfare for the purpose of making suggestions to the department for carrying out an expanded medical care program within the scope of Tennessee's present plan.

Recommendations of the Advisory Committee: (1) That the Department of Public Welfare continue to limit with certain exceptions, hospitalization to ten days per year for each patient. (2) That exceptions

be made upon the recommendation of the attending physician with a total of 30 days per year as the maximum for each patient. (3) That care in convalescence homes be an adjunct to hospital care. (4) That information about the limitations of the public assistance medical care program be provided all physicians. (5) That the department should assume the responsibility for explaining the details of the program to the hospitals. (6) That the department continue the present plan whereby the medical review officer is a local doctor.

The report continued with information concerning the Department of Public Welfare and its expanded Public Assistance Hospitalization coverage for old age assistance recipients.

The report stated that the committee strongly advised that the hospital remind the attending physician of the necessity for requesting an extension as soon as the need for additional hospitalization has been determined. The report gave the definition of public assistance hospitalization for old age assistance recipients and stated that it was the same as that for all other public assistance recipients.

The report contained advice on how to complete applications and the various forms of the Department of Public Welfare.

Report of Committee on Rural Health

JULIAN C. LENTZ, JR., M.D., Chairman

The report enumerated the activities of the committee, briefly commenting on their purpose and making recommendations for the coming year.

The report reviewed the regional rural health conference of southeastern states conducted in Atlanta, Georgia on October 7, 1960, attended by the Chairman. The report stated that the committee had corresponded with other state medical associations engaged in rural health programing and information was exchanged with such committees.

The report included the results of a meeting with the Chairman of the Association's Tennessee Medical Foundation Committee for the purpose of eliminating over-lap and separate functions of the two committees. The report also outlined the discussions involved wherein representatives of the com-

mittee attended a meeting proposing a Tennessee Health Council.

It was recommended that the Rural Health Committee continue as a standing committee of the Association and that a member of the Farm Bureau Federation and a member of the University of Tennessee Agricultural Extension Service be appointed as active members of the committee. This would effect a close working relationship between medicine and the two groups most concerned with matters relating to rural health.

It was further determined that the Rural Health Committee should be considered as an action group, eager to define and tackle any problem in the area of rural health which might arise. The report stated that most problems of rural health can be handled at the local level, either through a local medical society, health department or farm group, but should such a problem arise that further action is necessary, the committee would stand ready to act.

Report of Public Service Committee

ROBERT M. FINKS, M.D., Chairman

The report stated the amount of work and activity directed toward surveying and evaluating the public service efforts of the county medical societies and stimulating county societies to implement those public service projects designed and approved by the state committee. The report included a survey of county societies who do not have a public service committee and the state committee urged that where practical, a public service committee be established in each county society or multi-county society.

In an effort to further stimulate activity, it was recommended that the Chairman of each county society's public service committee be made an ex-officio member of the TSMA Public Service Committee. This recommendation was subsequently approved by the Board of Trustees.

The report outlined a list of suggested county society public service activities for the various committees. These suggestions were communicated to county societies with the recommendation that they be considered as a minimum public service program for each society.

It was stated in the report that the com-

mittee believed that continued improvement of medical public relations is held by the individual county medical society and that the intent to which this goal is achieved will depend upon the interested activity as expressed by the county societies in carrying out a sound public service program within the community.

Work performed by the Sub-Committee on Aging was reported, as were the activities conducted by the Sub-Committee on Nursing.

The report stated that the committee had worked toward stimulation of interest on the part of high school students to take up careers in medicine and its allied fields. The booklet "Planning a Health Career in Tennessee" had been distributed to all county medical societies with the request that the booklet be used in presenting "Career Day" programs for local high school students.

Consideration has been given by the Public Service Committee to the problem of physician placement with special reference to assisting rural communities in obtaining necessary physician services. The committee cooperated with the Sears Roebuck Foundation in this endeavor.

It was reported that during the past year, the placement service had processed 112 applications in both categories of communities seeking physicians and physicians seeking communities, and assisted in 15 placements.

The committee has studied the problem of the best method to be followed in orienting new members as to the privileges they accrue and responsibilities which they incur by virtue of their membership in organized medicine.

The committee requested and received approval from the Board of Trustees to inaugurate a new program in connection with the annual meeting. This program to be co-sponsored by the host society in the city where the annual meeting is conducted, would be a breakfast meeting for outstanding community leaders for the purpose of educating them on the problems of medicine.

The report concluded by calling for individual and collective work of members for greater effort to preserve the true image of the physician who is dedicated to the public service of his community.

**Report of Tennessee Medical
Foundation Committee**

HARRISON J. SHULL, M.D., Chairman

The committee made the following report:

(1) Consultation service in medicine and surgery continued at Oneida and at Monterey and in x-ray at Palmer. These activities are at a somewhat reduced pace as compared with same periods in the past. The funds for the payment of consultants is still furnished by the United Mine Workers of America, these funds being deposited with the treasurer of the Tennessee Medical Foundation and made from the Tennessee Medical Foundation office to the consultant on a per service visit. Dr. James P. Worden of Knoxville who has arranged the consultations and Dr. John E. Kesterson of Knoxville who has contributed long hours to the activity of the Foundation in East Tennessee over the years in this and other work, deserve special credit for these services in a needy area.

(2) As reported last year the Foundation believes that one of the areas in which the practicing physician may at times find himself severely limited is in the lack of adequate and dependable ancillary and supportive services such as laboratory, x-ray and hospital administration. The strength of these services in a given locality may be affected by circumstances not always under the control of the physicians themselves, circumstances which may make the local physicians desirous of having consultative advice on these matters. In an effort to explore, on a pilot basis, the advisability and usefulness of such consultative service to a local medical community the Tennessee Medical Foundation has worked out with the Tennessee Society of Pathologists a plan to study the laboratory situation in a hospital in East Tennessee (Harriman) and in Middle Tennessee (Shelbyville) on the invitation of each of these hospitals. The plan also is intended to include a hospital in West Tennessee, but as yet there has not been an invitation from a West Tennessee hospital. This study is intended to be over a sufficient period of time to give a careful appraisal of needs and facilities for meeting these needs and to give whatever help is available and desired in meeting these needs. This study

is to be concerned not alone with tissue work, but with clinical laboratory procedures as well.

All of the above reports of standing committees were referred to the Reference Committee on Reports of Standing Committees—Reference Committee A.

Standing committees not making reports included (1) Committee on Hospitals (2) Grievance Committee. These committees had no business to report.

Nominating Committee

The Speaker requested the delegates from the three grand divisions of the state to congregate in three areas of the room for the purpose of organizing a Nominating Committee. The Speaker appointed three temporary chairmen of the grand divisions for organization and election of a permanent Nominating Committee.

Dr. A. M. Patterson, Chattanooga, was appointed temporary chairman for East Tennessee; Dr. Jas. C. Gardner, Nashville, temporary chairman for Middle Tennessee; and Dr. Fred Strain, Memphis, temporary chairman for West Tennessee.

Following the caucus of the delegates from each grand division of the state, the Speaker again called the House to order and announced the personnel of the Nominating Committee, which consisted of the following: (Dr. Rychener of Memphis had previously pointed out that no two members of the committee should represent the same county medical society.) Members of the Nominating Committee—Dr. Joseph L. Raulston, Knoxville, Chairman; Dr. A. M. Patterson, Chattanooga; Dr. E. L. Caudill, Jr., Elizabethton; Dr. James N. Thomasson, Nashville; Dr. William A. Hensley, Cookeville; Dr. John Derryberry, Shelbyville; Dr. Duane Carr, Memphis; Dr. John R. Thompson, Jackson; Dr. Byron O. Garner, Union City.

The Speaker announced that the business of the Nominating Committee should be transacted as early as possible. The committee was directed to furnish the names of candidates for councilors from the Second, Fourth, Sixth, Eighth and Tenth Districts. The Nominating Committee would make a report for nominations of councilors later in the afternoon session.

The Speaker announced that the House would continue with hearing the reports of special committees. The following special committee reports were rendered.

Special Committees

Report of the Consultative Committee on the Administration of Prepaid Medical Care Plans

C. N. GESSLER, M.D., Chairman

Highlights: The report outlined the methods followed and the results obtained in the beginning phase of the survey of several hospitals in the state to determine if abuses were occurring in prepaid medical care plans. In the report, it was outlined the audit that had been made at the Maury County Hospital at Columbia, Tennessee. The report stated that no concrete evidence of mis-use in insurance facilities was found in the Maury County Hospital; however, only 354 cases were reviewed and these were selected cases and did not necessarily reflect a true picture of the over-all operation. The committee had found that the type of survey conducted in the Maury County Hospital was expensive.

The committee had been granted an appropriation of \$2,500 to make the series of audits and due to the expense involved, it was found that an additional \$2,000 would be requested.

Report of Committee on Disaster Planning

MOORE MOORE, JR., M.D., Chairman

Highlights: The report of the chairman stated that he had attended the Eleventh County Medical Society Conference on Disaster Medical Care featuring the United States Public Health Mobilization for Disaster held in November, 1960 at Chicago. It was also reported by the Chairman that he had attended the regional workshop sessions in New Orleans on February 18, 1961. The report pointed out the necessity of organizing and planning for disaster programs and stated that this must begin at the ground roots level, specifically with each hospital or clinic no matter how small or large. The report recommended that each doctor should know where to go automatically in the event of any type of disaster and should be in relation to his hospital affiliations. The report stated the problems

involved with communications in the event of disaster.

The report stated that the Public Health Service is generally considered to be in charge at a disaster, but working with the office of Civil Defense Mobilization.

The report recommended that means be developed to utilize allied personnel such as dentists, veterinarians and others. The report concluded by stating that it was the definite responsibility of the medical profession to teach themselves and all allied groups in the problem of handling mass casualties.

Report of Committee on Industrial Health and Workmen's Compensation

GEORGE E. DUNCAN, M.D., Chairman

Highlights: The report stated that the committee had been working in conjunction with the Committee on Postgraduate Education. A total of forty-eight hours of instruction in occupational health was conducted in ten cities in the state. Articles had been prepared for the TSMA JOURNAL on industrial medicine. The report stated that the function of the committee was becoming increasingly important in that 80% of the nation's working force is cared for by part-time industrial physicians.

Report of Liaison Committee to United Mine Workers of America

CECIL E. NEWELL, M.D., Chairman

Highlights: The report stated that close liaison had been carried out with the United Mine Workers of America through their area medical administrator, Dr. John D. Winebrenner. The report stated that income from bituminous coal production is declining. It was pointed out that in spite of these various economies, the UMWA continues to provide medical services to its members.

Other problems arising during the past year had been readily resolved with the committee and the UMWA.

Report of Advisory Committee to Woman's Auxiliary to TSMA

WILLIAM A. GARROTT, M.D., Chairman

Highlights: The report stated the outstanding work performed by the Woman's Auxiliary during the year. Attention was

called to the National Trophy for contributions for AMEF from the Woman's Auxiliary in Tennessee, and further pointed out the ingenious methods to obtain contributions to this worthy cause. The report also lauded the significant efforts of the Auxiliary in legislative matters.

The report concluded by stating that the Auxiliary had presented the medical profession to people of all ages in the best possible light and had joined other groups in pursuit of worthwhile community efforts.

Report of Committee on Blood Banks

MERLIN L. TRUMBULL, M.D., Chairman

Highlights: The report stated that organized labor has evidenced an increasing interest in blood banking activities, particularly at the national level. The report pointed out the intense interest manifested by AFL-CIO in the Joint Blood Council. It was believed that better understanding is being obtained on this subject with labor leaders.

It was pointed out that efforts were continuing at a high level to adequately supply the necessary blood needed. Physicians were encouraged to obtain blood replacements from friends and relatives of patients.

The clearing house method of obtaining blood was reviewed by the chairman. The American Association of Blood Banks and the American National Red Cross were the two clearing houses explained in the report.

It was stated that the Joint Commission on Accreditation of Hospitals had shown an increasing interest in blood bank operations.

Report of Committee on Mental Health

FRANK H. LUTON, M.D., Chairman

Highlights: It was reported that the committee met on March 12th at which time there was a review of the functions and purposes of the committee and of the activities conducted. The report outlined activities sponsored by the State Department of Mental Health and it described a recent workshop in psychiatry for general practitioners held at Clarksville during the past few months. Committee members participated with other physicians in programs of education in the area of "Boy-Girl" Relationships, "Preparation for Christian Marriage," "Human Reproduction" and others.

These programs have been held in the setting of high school fellowships of various Protestant churches in the state and represents an interest that is being shared by medical associations throughout the country. It was pointed out that this was an opportunity for county medical societies to sponsor similar programs that might favorably influence the lives of many young people in health, marital happiness and morality.

The Chairman reported on his attendance and the ideas discussed at the Seventh Annual Conference of Mental Health Representatives of state medical associations. The theme of this program was "An Appraisal of Developments and Progress in Mental Health Programs as Observed by Conference Participants."

The report included the committee's study on the "Medical Use of Hypnosis" that was made by a sub-committee of the Council on Mental Health which states the official attitude of the AMA toward this technique. It was stated that the committee is concerned with the problem of stimulating further interest of the physician in programs relating to his responsibility for the treatment and management of many of the problems of the mentally ill. Closer relationships with county medical societies in the development of programs with psychiatric content are needed, it was reported.

The report concluded by stating that the Committee on Mental Health be called upon for any help and direction by members and groups of the Association who may wish to initiate programs of a psychiatric nature in any part of the state.

Report of Committee on Health Project Contest

MRS. NOBLE W. GUTHRIE, Chairman

Highlights: The report outlined the work conducted by the committee in getting out reproductions of contest rules, obtaining lists of schools and distribution of memoranda to all chairmen concerning the health project contest sponsored by TSMA. The contest was again endorsed by the Tennessee Department of Education.

Nineteen entries were submitted for judging, one more than the previous year. Hay Long High School Science Club, Mount

Pleasant, Tennessee, was selected as the first place winner. A check for \$400 was presented to representatives of the club and their sponsor at the President's Banquet.

Second prize award of \$100 presented by the Woman's Auxiliary went to the White Station High School Science Club of Memphis.

The third and fourth prize winners were presented \$25 each. These winners were Powell High School, Knox County and Lee Academy, Bradley County. Each high school which submitted an entry received a certificate of achievement in recognition of its interest and effort in improving community health.

Report of Tennessee Committee for American Medical Education Foundation

JEAN M. HAWKES, M.D., Chairman

Highlights: The report stated that on January 31, 1961, 307 physicians had given \$12,696 to the American Medical Education Foundation. The campaign consisted of appeals to each medical society and hospital staff, as well as direct mailing to each physician in the state. The report included the manner in which solicitations were made by the University of Tennessee and Vanderbilt University Schools of Medicine.

A questionnaire sent to a group of southern medical schools elicited the opinion that most endowed institutions already had active fund-raising machinery and felt that AMEF increased their donations very little. In some cases, the donations through AMEF were smaller than those made direct to the school. It was believed by the committee that the campaign was of benefit to state supported institutions. The report recommended that the AMEF should continue to receive enthusiastic support from physicians.

Report of Committee on Youth and Education

JOHN H. BURKHART, M.D., Chairman

Highlights: A major project undertaken by the committee in the past year had been the co-sponsorship with the Tennessee Secondary Schools Athletic Association of a series of regional athletic injury clinics throughout the state.

The clinics sought to create an awareness on the part of high school coaches and

trainers of the proper preventive techniques as well as the positive aspects of sports conditioning. Material presented at each clinic was developed by a physician and a coach, working as co-chairmen.

Clinics were presented in Memphis, Jackson, Nashville, Chattanooga, Knoxville and Johnson City, and were attended by approximately 200 coaches, trainers and physicians.

The report contained two recommendations: (1) That clinics be co-sponsored at the state level by TSMA and TSSAA not oftener than once every two years. (2) That county medical societies initiate and foster the "team physician" plan in all areas in which such a plan does not exist. The report stated that it was important to have a physician "on the bench" in sports events, particularly where body contact is involved. It was pointed out that TSMA was working with a special committee of the Tennessee Public Health Association to determine what programs can be organized and implemented to improve the over-all level of health among the children in public schools.

The report concluded by stating that the Chairman had attended the Eighth National Conference on Physicians and Schools held in Chicago and sponsored by the AMA Department of Health and Education. The report stated that ideas obtained could be put to excellent use in the committee's work in the future.

All of the above reports of special committees were referred to the Reference Committee on Reports of Special Committees—Reference Committee B.

Special committees not presenting reports were: Committee on Governmental Medical Services, Committee on Tuberculosis, Legal Relations and Interprofessional Code Committee, Committee on Sight Conservation, and General Liaison Committee.

Special Reports

Report of Woman's Auxiliary to TSMA

MRS. ROBERT L. AKIN, President

(Before rendering the report, the President-Elect of the Auxiliary, Mrs. E. E. Wilkinson of Nashville, was introduced to members of the House.)

Highlights: Mr. Akin presented the silver trophy that the Tennessee Medical Auxiliary won for the most AMEF donations for

1959-60. The report stated that objectives of the Auxiliary are: (1) To assist the TSMA in its program for the advancement of medicine and public health. (2) To coordinate and advise concerning the activities of the county auxiliaries. (3) To cultivate friendly relations and promote mutual understanding among physicians' families. The report stated that the fourteen auxiliaries in Tennessee include 1,388 members and comprise more than half of the counties in Tennessee. The national auxiliary theme for the year is "Preserve and Enhance the Heritage of American Medicine."

The Auxiliary President outlined the tremendous amount of work performed by Auxiliary members in the legislative program including letters written to Congressmen and Senators asking support of the Kerr-Mills Bill. Efforts to keep medical schools free of government control through donations to AMEF were reported. Work performed in the service of nurse recruitment was outlined at length. Activities such as "The Family Fallout Shelter," films covering health careers, mental health, cancer, un-American Activities, international medicine and the need of blood banks were subjects discussed at meetings of the Auxiliary. The Auxiliary's support of the Tennessee Medical Foundation was outlined. Work conducted for senior citizens was covered. The Auxiliary's work in sponsoring the health project contest was outlined in detail. The part played by each Auxiliary in promoting "Doctor's Day" was revealed.

The report concluded by inviting members of the House to visit the annual sessions of the Auxiliary, to hear their reports, see their exhibits and visit the arts and crafts show.

Report of AMA Delegation

DAUGH W. SMITH, M.D., Chairman

Highlights: The Chairman recommended that each member read the report in detail but preferred to abstract the report and give highlights of activities. The annual meeting of the House of Delegates of the AMA in June, 1960 and the clinical session of the House of Delegates in December, 1960 were reported. Such matters as health care for the aged, pharmaceutical issues, occupa-

tional health programs, and allied health groups were reviewed.

The report went into detail regarding resolutions number three and four introduced in the 1960 annual session of the House of Delegates of the AMA dealing with the National Foundation. The chairman reviewed each step taken on this program since it was initiated through resolutions presented by the Tennessee Delegation. The report discussed the functioning of the new policy adopted by the AMA House pertaining to the National Foundation. The policy adopted was outlined in detail, as well as the functioning of the various medical society advisory committees and their relationship to the policy on the National Foundation.

In covering the activities of the clinical session in December, the report went into detail of the AMA's support of the Kerr-Mills Bill which was passed and is presently the law of the land for medical assistance to the aged. A report on the proposed dues increase to the AMA was presented. The programs were revealed wherein the American Medical Association proposed to use additional funds. Pertaining to the dues increase, it was recommended that an annual dues increase of \$20 be implemented over a period of two years; ten dollars on January 1, 1962 and ten dollars additional on January 1, 1963.

The report concluded by revealing the continued study and periodic re-evaluation of the trend toward locating physicians' offices in or adjacent to hospitals.

Report of Reference Committee on Outstanding Physician of the Year Award

J. PAUL BAIRD, M.D., Chairman

The Speaker announced that the next order of business would be the report of the Reference Committee on the Physician of the Year Award and the election.

Dr. J. Paul Baird, Chairman, Dyersburg, presented the report of the Reference Committee, and submitted, in keeping with the requirements, the names of three physicians for the award. They were: Dr. John B. Steele of Chattanooga; Dr. C. D. Walton, Mt. Pleasant; and Dr. Lea Callaway, Maryville.

The Speaker called for the customary

three-minute nominating speeches for each of the candidates. Dr. George K. Henshall spoke in behalf of Dr. Steele; Dr. Ambrose M. Langa spoke in behalf of Dr. Walton; and Dr. Robert H. Haralson spoke in behalf of Dr. Callaway.

Following the nominating speeches, the Speaker asked members of the House to prepare their ballots. Tellers were appointed to count the ballots. Prior to voting, the Speaker asked the will of the House to whether such an election would require a plurality or a majority. A motion was duly made and seconded, and adopted that a majority be used in the election. **The motion was adopted.**

Election of Physician of the Year

The result of the balloting for the Outstanding Physician of the Year Award was announced and Dr. John B. Steele of Chattanooga was named the Outstanding Physician of the Year in Tennessee for 1961.

Election of Councilors

The Speaker again announced the names of the physicians composing the Nominating Committee and called upon Dr. Joe L. Raulston, Chairman, to present the slate of councilors selected by the Nominating Committee.

Dr. Raulston stated that the Committee had nominated councilors for Districts Two, Four, Six, Eight and Ten.

Councilors nominated were as follows: B. M. Overholt, M.D., Knoxville—Second District; Thurman Shipley, M.D., Cookeville—Fourth District; Laurence A. Grossman, M.D., Nashville—Sixth District; Frank Moore, M.D., Jackson—Eighth District; Francis Cole, M.D., Memphis—Tenth District.

Following the nomination of these councilors, the House voted and the nominees as presented were elected Councilors of the respective Districts named. In each instance, the Speaker called for additional nominations from the floor. There were none.

New Business

Dr. Henry Douglass, Chairman of the Doctors' Memorial Trust Fund, gave an informal report of the status of the finances contained in the fund. He outlined the

amount of money approximating \$1,000 and the interest that had accrued to date. He stated that it was up to the three trustees of the fund to use the monies as seen fit for a medical charity. He did not request any specific instructions from the House but presented the report primarily for information.

Dr. I. E. Phillips, delegate from the Sullivan-Johnson County Society asked permission for the floor to present information to the House of Delegates. He outlined a secret ballot conducted among 132 members of his society, 91 returning votes, 58% for and 42% against inclusion of physicians under social security provisions currently in effect. He stated that the Sullivan-Johnson County Society instructed the delegates to TSMA to inform the House of Delegates that the Sullivan-Johnson County Society had taken this action. No request for action by the TSMA House was made. It was presented as a matter of information only.

Announcements

The Chairman of the Council, and Chairmen of various reference committees of the House of Delegates announced the times and places of meetings of their committees for the evening and following day.

There being no further business to be presented, the first session of the House of Delegates recessed at 5:40 p.m., until 9:00 a.m. Tuesday, April 11, 1961.

TUESDAY MORNING SESSION

April 11, 1961

The House of Delegates reconvened at 9:00 a.m. in the Read House, Chattanooga, with Dr. Joseph W. Johnson, Jr., Speaker of the House, presiding. Dr. E. L. Caudill, Jr., Elizabethton, Chairman of the Credentials Committee reported that of the 95 registered delegates, a quorum was present.

The first order of business was the introduction of additional amendments.

Introduction of Additional Amendments

Amendment No. 1 to the Constitution under the heading "Officers" would amend Article VIII, Section 3 by eliminating the language contained in this section and substituting additional language. The amendment would primarily change the boundaries of the ten councilor districts in which

Tennessee is divided and which bears upon the work of the council. The ten councilor districts would be defined by the action of the House and the re-arrangement of the counties would be placed in each of the districts involved. Maps were presented for the enlightenment of the House.

Amendment No. 1 to the Constitution was referred to the Reference Committee on Constitution and By-Laws.

Introduction of Additional Resolutions

Resolution No. 12:

Subject: Tennessee Plan

Introduced by Dr. Chas. C. Trabue, Nashville, dealt with the Tennessee Plan and pointed out the decreasing percentage of participating physicians in the plan and the resolution was drawn for the purpose of encouraging more physicians to participate in the plan by granting them some compensatory advantage. It resolved that the House instruct the Prepaid Insurance Committee to require all insurance carriers under the Tennessee Plan to henceforth include on their claim forms a paragraph to be signed by the claimant instructing the carrier to pay the physician direct only if he is a participating physician and otherwise to pay the patient direct.

Resolution No. 13

By: Merlin L. Trumbull, M.D., Memphis

This resolution pointed out that the new medical examiners act had some features which were probably going to require considerable close cooperation between the Department of Public Health and the pathologists. It stated that pathologists have by training an interest and concern in forensic pathology and, thereby, the operation of the provision of the Post Mortem Examination Act. It resolved that the Tennessee Society of Pathologists offer its good offices to the Commissioner of Public Health and to any appointed state medical examiner in the development and implementation of the provisions of the law, preferably through the creation of a liaison committee from the Tennessee Society of Pathologists, and the resolution further requested such endorsement by the Tennessee State Medical Association.

The above resolutions were referred to the Reference Committee on Resolutions.

Report of Nominating Committee and Election of Officers

JOSEPH L. RAULSTON, M.D., Knoxville
Chairman

The Chairman of the Nominating Committee submitted the following slate.

(In each instance, the Speaker called for additional nominations from the floor. There were none.)

President-Elect—Dr. William J. Sheridan, Chattanooga; Dr. James J. Rogers, Dayton; and Dr. Herschel H. Hyatt, Copper Hill.

Speaker of the House of Delegates—Dr. Joseph W. Johnson, Jr., Chattanooga

Vice-Speaker of the House—Dr. J. Malcolm Aste, Memphis

Secretary-Editor—Dr. R. H. Kampmeier, Nashville

Trustee from Middle Tennessee (three-year term)—Dr. Robert M. Finks, Nashville

Vice-President (East Tennessee)—Dr. Walter E. Scribner, Kingsport

Vice-President (Middle Tennessee)—Dr. J. Harvill Hite, Pulaski

Vice-President (West Tennessee)—Dr. Baker Hubbard, Jackson

Delegate to the American Medical Association (West Tennessee)—Dr. Alvin J. Ingram, Memphis

Alternate Delegate to the American Medical Association (West Tennessee)—Dr. Julian K. Welch, Jr., Brownsville

Delegate to the American Medical Association (Middle Tennessee)—Dr. Daugh W. Smith, Nashville

Alternate delegate to the American Medical Association (Middle Tennessee)—Dr. Thomas F. Frist, Nashville

Three physicians for the Public Health Council from Middle Tennessee, one to be subsequently appointed by the Governor—Dr. T. R. Ray, Shelbyville; Dr. James B. Black, Murfreesboro; Dr. Donald Bradley, Sparta

Three physicians for the Board of Trustees of State Tuberculosis Hospitals (Upper East Tennessee) one to be subsequently appointed by the Governor—Dr. William K. Rogers, Knoxville; Dr. Robert Newman, Knoxville; Dr. Sheldon Domm, Knoxville

Three physicians to complete the unex-

pired term of Dr. Wesley W. Wilkerson, deceased, for the Board of Trustees of the State Tuberculosis Hospitals (Middle Tennessee) one to be appointed—Dr. Clarence Woodcock, Nashville; Dr. Robert McCracken, Nashville; Dr. Walter Diveley, Nashville

Balloting for the office of President-Elect was conducted by secret ballot. Following the balloting, the Speaker appointed Dr. Thomas Parrish, Dr. H. P. Clemmer and Dr. L. A. Killeffer as tellers to count the ballots.

Following the counting of the ballots, the Speaker announced that Dr. William J. Sheridan, Chattanooga, had been named President-Elect of the Tennessee State Medical Association to assume the Presidency in 1962. The Speaker appointed the three immediate past presidents to escort the President-Elect and present him to the General Scientific Session. He appointed Dr. Ralph O. Rychener, Dr. H. L. Monroe and Dr. Jas. C. Gardner for this purpose.

All of the other nominees submitted by the Nominating Committee were voted upon individually and unanimously elected to the offices for which they were nominated.

The election of Dr. William J. Sheridan as President-Elect created a vacancy on the Board of Trustees and the Nominating Committee submitted the name of Dr. Harmon L. Monroe, Erwin, as the nominee placed before the House to complete the unexpired term on the Board of Trustees. Dr. Monroe was unanimously elected to complete the term of Dr. Sheridan.

There were no other nominations made from the floor for any of the offices to be filled.

Upon the completion of the voting for all nominations, the new President-Elect, Dr. Sheridan, asked permission for the floor and made a brief speech thanking members of the House of Delegates for their confidence in naming him as President-Elect. He pledged himself to carry out the duties of the office of President in a creditable manner for the Association.

The Speaker announced that the next order of business was the Report of the Reference Committee on Amendments to the Constitution and By-Laws.

Report of Reference Committee on
Amendments to the Constitution and By-Laws
LAURENCE A. GROSSMAN, M.D., Chairman
By-Laws—Amendment No. 1

“Amend Chapter VIII, Section 3, by eliminating the first sentence in Section 3 and substituting the following:

‘Section 3: The Committee on Public Policy and Legislation shall consist of nine members, one from each congressional district of the State. The committee shall be appointed by the Board of Trustees and the Board will appoint the chairman of the committee. The Secretary-Editor will be ex-officio, a member of the committee. Following the passage of this amendment, the committee shall be organized with three members to be named for three years, three for two years and three for one year. Thereafter, members of the committee shall be named for a term of three years each. In the work of the committee, if it is found that additional members are necessary in the conduct of the committee’s business, the committee may request the Board of Trustees for additional appointments to serve one year terms.’

“Section 3 would then read:

‘Section 3: The Committee on Public Policy and Legislation shall consist of nine members, one from each congressional district of the state. The committee shall be appointed by the Board of Trustees and the Board will appoint the chairman of the committee. The Secretary-Editor will be ex-officio, a member of the committee. Following the passage of this amendment the committee shall be organized with three members to be named for three years, three for two years and three for one year. Thereafter, members of the committee shall be named for a term of three years each. In the work of the committee, if it is found that additional members are necessary in the conduct of the committee’s business, the committee may request the Board of Trustees for additional appointments to serve one year terms. Under the direction of the House of Delegates, it shall represent the Association in securing and enforcing legislation in the interest of the public health

and of scientific medicine. It shall keep in touch with professional and public opinion, shall endeavor to shape legislation so as to secure the best results for the whole people, and shall utilize every organized influence of the profession to promote the general influence in local, state, and national affairs and elections. Its work shall be done with the dignity becoming a great profession, and with that wisdom which shall make effective its power and influence. It shall have authority to be heard before the entire Association upon questions of great concern at such times as may be arranged during the Annual Meeting."

ACTION: ADOPTED

By-Laws: Amendment No. 2

"Amend Chapter V, Section 2, by eliminating the language contained in this Section and substituting the following:

'Section 2: On or before March 1st each year, preceding the annual session, the Board of Trustees shall consider the names of those members from county medical societies certified to the Tennessee State Medical Association, as delegates to the House of Delegates. The Board will select nine delegates from those certified to compose a Nominating Committee. The nominees should represent the three grand divisions of the state, with three members being from East Tennessee, three members from Middle Tennessee and three members from West Tennessee. No two members of the Nominating Committee shall represent the same county medical society. Upon confirmation of the Nominating Committee by the Board of Trustees, the Executive Director of the Association shall notify the secretaries of all component medical societies of the names of members of the Nominating Committee, with the request that those members named to the Nominating Committee shall be made known to the membership of each of the component societies.

'The Nominating Committee will be supplied by the Board of Trustees with the offices that are to be filled and elected by the House of Delegates. Any county medical society desiring to place the name of any physician for an office of the Tennessee State Medical Association, will have the op-

portunity to contact his representatives on the Nominating Committee from the grand division of the state in which he resides.

'The Nominating Committee shall elect its chairman. It shall be the duty of the Nominating Committee to consult with other members in selecting candidates for the offices and to hold one or more meetings prior to the opening session of the House of Delegates, at which the best interest of the Association and of the profession of the state for the ensuing year shall be carefully considered. The committee shall report the results of these deliberations to the House of Delegates in the form of a ticket containing the names of the nominees for the offices to be filled. The Nominating Committee shall name at least one member for each of the offices to be filled at the general session."

ACTION: ADOPTED

Constitution—Amendment No. 1

"Amend Article VIII, Section 3 by eliminating the language contained in this Section and substituting the following:

'Section 3: There shall be one councilor for each of the ten councilor districts in Tennessee and such councilor districts shall be divided into sections to include those counties in each of the councilor districts as defined by the action of the House of Delegates in April, 1961 and listed in this section. The councilors shall be elected for a term of two years, in the following manner: councilors from odd numbered districts will be elected in even calendar years and councilors from even numbered districts will be elected in odd calendar years. No councilor shall serve more than four consecutive years. The councilor districts shall be composed of the counties as listed in each of the following ten districts:

DISTRICT NO. 1—Carter, Claiborne, Coker, Grainger, Greene, Hancock, Hawkins, Johnson, Sullivan, Unicoi, Washington

DISTRICT NO. 2—Anderson, Blount, Campbell, Hamblen, Jefferson, Knox, Loudon, Morgan, Roane, Scott, Sevier, Union

DISTRICT NO. 3—Rhea, Bledsoe, Bradley, Grundy, Hamilton, Marion, McMinn, Meigs, Monroe, Polk, Sequatchie

DISTRICT NO. 4—Clay, Cumberland, DeKalb, Fentress, Macon, Overton, Putnam,

Jackson, Pickett, Smith, White, Warren, Van Buren

DISTRICT NO. 5—Bedford, Coffee, Franklin, Lincoln, Marshall, Moore

DISTRICT NO. 6—Stewart, Montgomery, Robertson, Sumner, Houston, Dickson, Cheatham, Davidson, Wilson, Williamson, Rutherford, Cannon, Trousdale

DISTRICT NO. 7—Humphreys, Hickman, Maury, Perry, Lewis, Wayne, Lawrence, Giles

DISTRICT NO. 8—Gibson, Carroll, Crockett, Madison, Henderson, Haywood, Fayette, Hardeman, Chester, McNairy, Hardin, Decatur, Benton

DISTRICT NO. 9—Lake, Dyer, Obion, Weakley, Henry, Lauderdale

DISTRICT NO. 10—Shelby, Tipton

"The Council shall organize annually by the election of a Chairman and a Secretary." ACTION: Recommended for adoption by the Reference Committee. (However, due to Constitutional provision, an amendment to the Constitution must lie over for one year and be voted upon at the first day of next annual session, in 1962.)

The Report of the Reference Committee on Amendments to the Constitution and By-Laws was voted upon and adopted as a whole.

Report of Reference Committee on Resolutions

ALVIN J. INGRAM, M.D., Chairman

Following are the resolutions presented before the House of Delegates as amended and in final form.

RESOLUTION NO. 1

Opposition to Medical Legislation for Health Care Under Social Security

By: CHAS. C. TRABUE, IV, M.D.

"WHEREAS, the Tennessee State Medical Association, at the local and state level, has cooperated with the American Medical Association and other organizations during the past two and one-half years, in opposition to the Forand Bill and similar measures which would provide compulsory health care for the aged through the mechanism of social security, and

WHEREAS, this association has worked untiringly in opposition to such legislation in the past, and

WHEREAS, legislation for health care un-

der the social security system was defeated in the 86th Congress which represented a great victory over the proponents of the federal-medical care plan, and

WHEREAS, in the 87th Congress, another bill known as the "King" bill (HR 4222) and Senate bill (S 909) has been introduced calling for health care of aged citizens under the social security system; now therefore be it

RESOLVED, that through action of this House of Delegates, the Tennessee State Medical Association shall go on record as opposing the passage of H.R. 4222 and S 909, these bills calling for the socialization of medicine through the social security system in care for aged persons, and be it further

RESOLVED, that physicians throughout the state be urged to become familiar with this proposed law and to actively keep in touch with their representatives in the Congress, urging them to oppose the passage of any type of legislation contained in the original Forand Bill or in the existing bills, H.R. 4222 and S 909, and be it further

RESOLVED, that upon adoption of this resolution by the House of Delegates, that a copy of the resolution be mailed to all component medical societies in Tennessee and to the American Medical Association."

ACTION: **ADOPTED**

RESOLUTION NO. 2

Service Plan of Health Insurance for Persons 65 Years of Age and Older in Tennessee

By: JAS. A. KIRTLEY, JR., M.D.

"WHEREAS, the Prepaid Health Insurance Committee of the Tennessee State Medical Association has been studying for some two and one-half years, the feasibility of recommending a 'service plan' of health insurance for persons in Tennessee 65 years of age and over, and

WHEREAS, after thorough study and consideration of several types of plans, the Prepaid Health Insurance Committee, in its meeting on January 29, 1961, did go on record and recommends to the House of Delegates a Senior Citizens Plan of health insurance for aged persons, based on a fee schedule of 75% of the existing Tennessee Plan provided the Committee is able to secure a corresponding or at least significant reduction in insurance rates, and

WHEREAS, the proposed Senior Citizens Plan should include the same conditions and specified income limits as prevailing for persons now covered under the present Tennessee Plan; therefore be it

RESOLVED, that the House of Delegates of the Tennessee State Medical Association adopt the recommendation of the Prepaid Insurance Committee and authorize the committee to establish a Senior Citizens Plan based on a fee schedule of 75% of the existing Tennessee Plan, with the total income limits of \$2,400 per year for single individuals and for persons with total income of not more than \$4200 for married persons; and be it further

RESOLVED, that all of the conditions for service benefits be included in the plan as now called for under the existing Tennessee Plan."

ACTION: The resolution was recommended to be returned to the Committee on Prepaid Insurance for further study and was at first approved. However, upon subsequent action of the House, a motion was made by Dr. Chas. C. Trabue to bring this resolution back before the House of Delegates for further discussion. After considerable debate, the motion was voted upon and since it required a two-thirds majority, the vote of the House was 54 to 17 to re-open the resolution for discussion before the House of Delegates. After discussion, a motion was made to table the resolution and the motion to table was defeated by a vote of 48 to 23. After the motion to table failed, the Chairman of the Reference Committee moved the adoption of Resolution No. 2.

FINAL ACTION: **Resolution No. 2 as stated above in amended form was adopted.**

RESOLUTION NO. 3

Extension of the Tennessee Plan to Provide for a "Plan B" of Service Benefits to Persons in Higher Income Levels

By: JAS. A. KIRTLEY, JR., M.D.

"WHEREAS, the Prepaid Health Insurance Committee of the Tennessee State Medical Association has been studying for the past year, a proposed extension of the Tennessee Plan to cover persons in higher income levels, and

WHEREAS, several meetings in consulta-

tion with underwriters have been conducted for the purpose of gathering data to present such a plan to this House of Delegates, and

WHEREAS, at a meeting of the Prepaid Health Insurance Committee held on January 29th, a proposal was adopted to add a "Plan B" to furnish service benefits in health care to a greater number of persons in Tennessee needing protection of prepaid health insurance, and

WHEREAS, it has been found that the average income per family in Tennessee has risen considerably in recent years, out-dating to a considerable extent the existing Tennessee Plan, which was formed primarily for persons in the low income levels, and

WHEREAS, the participation of Tennessee physicians in the Tennessee Plan has been steadily decreasing over the past five years to the end that the present plan is not adequate to cover the public, or broad enough to interest the great majority of physicians in Tennessee; therefore be it

RESOLVED, that the House of Delegates of the Tennessee State Medical Association give its approval to the establishment of a 'service plan' of prepaid health insurance to cover persons in Tennessee with higher income levels; and be it further

RESOLVED, that the conditions of eligibility for service benefits under a proposed 'Plan B' coincide with the conditions set forth in the existing Tennessee Plan, with the exception of the income limits; and be it further

RESOLVED, that the income limits under the proposed 'Plan B' should include single individuals who do not earn more than \$4,000 per year, and married persons with families who do not have an income exceeding \$7,500 per year, such persons to be eligible for service benefits under the plan; and be it further

RESOLVED, that the unit value system be followed in developing the fee schedule, with each surgical procedure being based on \$4.50 per unit which would make for a fee schedule with a \$450 maximum in the proposed 'Plan B.' Comparable fee schedules for 'In-hospital Medical Care,' 'Anesthesiology,' and for 'Radiological Treatment of Malignant Diseases' will be included in the Plan; and be it further

RESOLVED, that the House of Delegates approve this recommendation and give its approval for the Prepaid Health Insurance Committee to proceed with the formation of an adequate schedule of procedures and fees."

ACTION: The Resolution was referred back to the Committee on Prepaid Health Insurance for further study.

RESOLUTION NO. 4

Method for Increasing Physician Participation in Tennessee Plan

By: JAS. A. KIRTLEY, JR., M.D.

"WHEREAS, there is now in excess of one million persons in Tennessee covered under the Tennessee Plan, and

WHEREAS, approximately two of every three persons covered by surgical insurance plans in Tennessee are Tennessee Plan policies, and

WHEREAS, initially, more than 1,700 Tennessee physicians participated in the plan at a time when the membership of the Tennessee State Medical Association was considerably less than at present, and

WHEREAS, in the last five years, participation by Tennessee physicians has been steadily decreasing to the end where large groups of consumers of health insurance have brought to the attention of the Tennessee State Medical Association the fact that not enough physicians participate in the plan to adequately care for persons covered under the Tennessee Plan, and

WHEREAS, by participating in the Plan, physicians in Tennessee will be taking the most effective step possible to make prepayment work and to further repel government intervention into the field of medical care; therefore be it

RESOLVED, that all county medical societies in the State of Tennessee be urged by action of this House of Delegates to appoint an appropriate committee to obtain greater participation by physicians in each county society as participating physicians in the Tennessee Plan; and be it further

RESOLVED, that each county society be supplied with an adequate number of participating physician agreement forms and that a personalized selling effort be made by each committee of their respective county medical society members to obtain doctors'

signatures on the participating agreement form; and be it further

RESOLVED, that the participating physician form shall read as follows:

THE TENNESSEE PLAN PARTICIPATING PHYSICIAN of the TENNESSEE STATE MEDICAL ASSOCIATION

I hereby subscribe as a participating physician under the program sponsored by the Tennessee State Medical Association for surgical and medical insurance under the Tennessee Plan as adopted and approved by the Tennessee State Medical Association.

In consideration of my being listed as such 'Participating Physician,' I hereby agree that my charges for the services included in the Master Schedules of Surgical and Medical Indemnities under the Tennessee Plan and rendered to the insured or his dependents shall not exceed the amount specified therein, provided the insured meets all the conditions set out in the brochure entitled 'The Revised Tennessee Plan' and also set out in the paragraph appended to the Schedules of Benefits in the policies of insurance under 'Notice.'

I agree to be bound by all the rules of the Association adopted for the administration of this program, and that this contract may be terminated by either the undersigned or the Association upon sixty (60) days written notice.

M.D.

ADDRESS:

DATE:"

ACTION: ADOPTED

RESOLUTION NO. 5

For Support by the Association of Training in Hypnosis only in Responsible Teaching Institutions

By: FRANK H. LUTON, M.D.

"WHEREAS, the American Medical Association has officially stated that there is a significant place in medical practice for hypnosis and that hypnotic techniques should be used within the scope of the professional training and competence of the physician

or dentist who employs it; that a physician should use hypnosis in undertaking only such procedures as he would be qualified to undertake without it; that hypnosis should be used on a highly selective basis in accordance with specified indications and contraindications; that it should be used in association with other techniques, never becoming a single technique used under all circumstances by any physician; and that it should be employed only by professionally qualified individuals who have received proper training in its use, and

WHEREAS, unregulated use of hypnosis by amateurs, charlatans and other incompetents does occur, and

WHEREAS, there has been a lack of action by responsible institutions for the development of comprehensive courses in hypnosis, and

WHEREAS, there has been a variety of special courses offered by individuals or organizations of doubtful standing, and

WHEREAS, there is a lack of scientific information regarding the hypnotic state; therefore be it

RESOLVED, that all members of the Association be urged to refrain from support of the various special courses now being offered by individuals and organizations not related to responsible teaching institutions, and be it further

RESOLVED, that the Tennessee State Medical Association membership support the development of adequate training programs in connection with established teaching institutions for doctors of medicine who wish to develop competence in the use of hypnosis as it relates to the practice of medicine, and be it further

RESOLVED, that members of the Association be guided by the existing Code of Ethics in governing professional relations with non-medical practitioners of hypnosis."

ACTION: ADOPTED

RESOLUTION NO. 6

AMA Dues Increase

By: DAUGH W. SMITH, M.D.

WHEREAS, in the December, 1960, meeting of the AMA House of Delegates, the House approved a Board of Trustees report which announced an increase in AMA dues, and

WHEREAS, it was recommended that this matter be voted upon at the annual meeting in June 1961, and

WHEREAS, the report indicated that the amount should be not less than \$10.00 and not more than \$25.00 to be effective January 1, 1962, and

WHEREAS, the AMA Reference Committee recommended that the annual dues be increased \$20.00 to be implemented over a two year period; \$10.00 on January 1, 1962 and \$10.00 on January 1, 1963, and

WHEREAS, it was stressed that the additional funds would be used to inaugurate and expand programs of the American Medical Association to include assistance to medical students, continuing education for practicing physicians, health advice to the lay public, medical research, the expansion of the communications division of AMA in order that the program could portray the best possible image of American physicians, therefore be it

RESOLVED, that the TSMA House of Delegates give its endorsement and approval to this action in order that TSMA's delegates to the American Medical Association can take positive action at the June meeting of the AMA in New York."

ACTION: ADOPTED

RESOLUTION NO. 7

Establishment of a Commission to Study the Relationship of Medicine to Optometry

By: RALPH O. RYCHENER, M.D.

"WHEREAS, in 1959 there was introduced in the House of Delegates of the AMA, Resolution #31 calling for the establishment of a Commission to Study the Relationship of medicine to optometry, and to report to the House of Delegates of the AMA; and

WHEREAS, the House of Delegates of the AMA caused to be established a Sub-Committee to Study the Relationship of Medicine to Optometry under the then existing Joint Committee to Study Paramedical Areas in Relationship to Medicine, and

WHEREAS, the original Joint Committee to Study Paramedical Areas in Relationship to Medicine has been succeeded by the Committee on Relationships of Medicine with Allied Health Professions and services; and

WHEREAS, optometrists are not ancillary

to medicine, but are independent licensed practitioners, and therefore do not constitute an allied health profession; and

WHEREAS, there exists confusion in the public mind as to the distinction between medical care for patients with ocular complaints and optometric services, and

WHEREAS, the lack of understanding in this area is a threat to the welfare of the patient; therefore be it

RESOLVED, that the House of Delegates of the AMA establish a Commission on the Relationship of Medicine to Optometry, to be appointed by the Speaker of the House; at least half the members of which Commission shall be physicians practicing in the ophthalmological branch of medicine; and be it further

RESOLVED, that it shall be the specific function of this Commission to conduct a broad study, from the standpoint of the public interest, of the problems involved in the present relationship of medicine to optometry, and to explore all possible and desirable solutions to these problems; and be it further

RESOLVED, that the Board of Trustees of the AMA be requested to provide adequate personnel and funds for the proper performance of the duty assigned to this Commission; and be it further

RESOLVED, that this Commission shall report to the House of Delegates not later than June 1962; and be it further

RESOLVED, that the delegates of the Tennessee State Medical Association to the American Medical Association be instructed to introduce this resolution at the annual session of the American Medical Association's House of Delegates in June, 1961."

ACTION: **ADOPTED**

RESOLUTION NO. 8

Change in the Administrative Procedure for Naming the Outstanding Physician Annual Award

By: J. PAUL BAIRD, M.D.

"The members of the Special Reference Committee on the Physician of the Year feel that a change in administrative procedure has become necessary in the selection of the Outstanding Physician Annual Award. The present procedure does not allow sufficient time to evaluate the merits of the candidates and consider the qualifications that

have been set forth especially when more than two or three candidates are to be placed before this committee. In effect and in the same manner this procedure does not give sufficient time to the local society to promote the interest of the candidate they sponsor. In the opinion that more time should be allowed to this feature, we offer to the House of Delegates the following resolution:

1. That any component society offering a candidate for the Outstanding Physician Award shall prepare a brochure to be submitted to the Executive Director not later than February 15 prior to the annual state meeting in April.

2. That the Executive Director shall turn over the files and brochures of the candidates to the Special Reference Committee as soon as they are received.

3. That this Special Reference Committee shall be composed and function in the same manner as formerly to select three of the candidates whose sponsor shall be given the opportunity of a nominating speech of five minutes in behalf of his candidate before the House of Delegates."

ACTION: **ADOPTED**

RESOLUTION NO. 9

TSMA's Endorsement of the Aims and Purposes of the Public Education and Information Program of the American Cancer Society, Tennessee Division

By: RALPH H. MONGER, M.D.

"Inasmuch as early diagnosis and proper treatment are essential to the effective medical management of carcinoma, and inasmuch as early diagnosis and proper treatment of carcinoma are applicable to all disciplines of the medical profession; and

Inasmuch as the American Cancer Society, Tennessee Division, Inc. and its certified Units in Tennessee, have as their objectives, through its Public Education and Information program, the early detection and proper treatment of cancer; and

Inasmuch as the American Cancer Society, Inc., the American Cancer Society, Tennessee Division, Inc., boards of directors are composed of fifty percent professional members and which applies also to many of the Unit boards of directors; and

Inasmuch as the Board of Directors of the American Cancer Society, Tennessee Divi-

sion, Inc., in its effort to accelerate early detection and proper treatment of carcinoma through its Public Education and Information program is seeking even greater counsel and participation of the Tennessee State Medical Association; now therefore be it

RESOLVED, that the Tennessee State Medical Association formally endorse the aims and purposes of the Public Education and Information program of the American Cancer Society, Tennessee Division, Inc. and recommend same to its component societies, and also urge our individual members to give counsel and leadership to the effective acceleration of these aims and objectives wherever feasible and possible."

ACTION: ADOPTED

RESOLUTION NO. 10

Nursing, Convalescent and/or Custodial Care Facilities for the Aged and the Infirm

By: DAUGH W. SMITH, M.D.

"WHEREAS, there is a growing need for nursing, custodial, convalescent and chronic illness care facilities for the aged and the infirm, and

WHEREAS, it has been demonstrated that church groups and religious organizations are well-suited for establishing this type of facility, on a tax-free basis, and

WHEREAS, the Tennessee State Medical Association is on record as favoring non-governmental operation and control of such facilities, now therefore be it

RESOLVED, that the House of Delegates of the Tennessee State Medical Association instruct the Board of Trustees of the Tennessee State Medical Association to charge the sub-committee on aging of the Public Service Committee to encourage the development of such facilities on a state-wide basis, with the wholehearted cooperation of the medical profession, and be it further

RESOLVED, that this committee be instructed to submit a preliminary report and recommendations to the Tennessee State Medical Association's Board of Trustees within six months from this date."

ACTION: ADOPTED

RESOLUTION NO. 11

Active Immunization Against Tetanus

By: CARL C. GARDNER, JR., M.D.

"WHEREAS, clinical tetanus is an ex-

tremely serious and frequently fatal disease, and

WHEREAS, injuries predisposing to tetanus are common in peace time and might be almost universal in the event of another world conflict, and

WHEREAS, passive immunization as tetanus prophylaxis is unsatisfactory in that it is not complete, it is short-lived, and it is attended with a high incidence of serum reactions, and

WHEREAS, active immunization against tetanus is a highly effective and innocuous procedure producing immunity for years, now therefore be it

RESOLVED, that the House of Delegates of the Tennessee State Medical Association have publicized by the State Association the fact that active immunization against tetanus is a highly effective and desirable procedure, and that such immunization can be obtained in the offices of most physicians, and at all County Health Departments, where such departments exist, and that the TSMA strongly advocate that all persons receive such immunizations, and be it also

RESOLVED, that the TSMA delegation to the AMA House of Delegates present a Resolution to this same effect at the next meeting of the AMA House of Delegates with the concept that encouragement of such immunization would be a real public service."

ACTION: ADOPTED

RESOLUTION NO. 12

Requirement for All Carriers Under Tennessee Plan to Include a Place in Claim Form Instructing Payment to Participating Physicians

By: CHAS. C. TRABUE, IV, M.D.

"WHEREAS, the promotion of the Tennessee Plan of Prepaid Insurance is one of the major activities of the TSMA, and

WHEREAS, the plan is at present losing its effectiveness in part due to the decreasing percentage of participating physicians in the plan, now therefore in order to encourage more physicians to participate in the plan by granting to them some compensatory advantage, be it

RESOLVED, that the House of Delegates does hereby instruct the Prepaid Insurance Committee to require all carriers under the Tennessee Plan to henceforth include on

their claim forms a paragraph to be signed by the claimant instructing the carrier to pay the physician direct only if he is a participating physician and otherwise to pay the patient direct, and be it further

RESOLVED, that nothing in this resolution shall prevent the Prepaid Insurance Committee from carrying out the sense of this resolution in some alternate manner which is in their opinion preferable."

ACTION: The resolution was discussed and further explained by Dr. Trabue. Efforts were made by several members of the House to amend Resolution No. 12 but upon vote, these amendments failed. At this point, Dr. I. E. Phillips moved that the resolution be tabled.

FINAL ACTION: The motion to table resolution 12 carried.

RESOLUTION NO. 13

Concerning Post-Mortem Examination Law

By: MERLIN L. TRUMBULL, M.D.

"WHEREAS, the Tennessee Society of Pathologists at its annual meeting on April 10, 1961, adopted the following resolution, and

WHEREAS, the members of the Tennessee Society of Pathologists have by training an interest and concern in forensic pathology, and thereby, the operation of the provision of the Post-Mortem Examination Act (Senate Bill No. 66, Public Acts of 1961), and

WHEREAS, many of the pathologists of Tennessee will be called upon through the provisions of this law to assist the state and county medical examiners, therefore be it

RESOLVED, that the Tennessee Society of Pathologists offer its good services to the Commissioner of Public Health and to any appointed state Medical Examiner in the development and implementation of the provisions of this law preferably through the creation of a liaison committee from the Tennessee Society of Pathologists, and be it further

RESOLVED, that the Tennessee State Medical Association add its endorsement to this action of the Tennessee Society of Pathologists."

ACTION: ADOPTED

The report of the Reference Committee on Resolutions was adopted as a whole as

amended by action of the House of Delegates.

Visiting Guests

Mrs. William Mackersie, Detroit, President of the Woman's Auxiliary to the American Medical Association was introduced and she responded with a few words for members of the House of Delegates.

Report of Reference Committee on Reports of Officers

JAMES N. THOMASSON, M.D., Chairman

Report of President

"Your committee has reviewed the report of the President, Dr. Ralph O. Rychener of Memphis and wishes to extend its commendation and to give thanks to him for his excellent work during his term of office. Dr. Rychener refers to the report of the Board of Trustees which outlines its actions and transaction of the year. He then enters upon a discussion of the role of the presidency.

"He stresses that the presidency should not merely be a reward for past work, but that it is an active dynamic position which involves not only knowledge of the inner workings of the Association, but also an awareness of the tremendous problems of a scientific, social, economic and legislative nature which are today confronting the profession. He places great emphasis upon the need for organized medicine to participate in civic and political activities at local, state and national levels.

"Dr. Rychener discusses at some length the problems which have arisen pertaining to the care of the aging population, especially our participation in the White House Conference and our efforts to defeat Forand-type legislation and to support more suitable legislation at state and national levels. He stresses the increasing complexities of the problems which will be present during the next few years.

"The committee wishes to express the appreciation of the entire membership of the Tennessee State Medical Association, to Dr. Rychener for his aggressive and capable leadership. We move the adoption of his report."

ACTION: ADOPTED

Report of Secretary-Editor

"Your committee has reviewed the report of the Secretary-Editor, Dr. R. H. Kampmeier. He and his associates have kept the Journal at a high level of excellence and have informed the membership of the activities of the Board of Trustees, the House of Delegates and of the committees of the Association. Dr. Kampmeier has pointed out the decline in the volume of advertising which may be expected to continue during the next year. The committee wishes to express to the Editor and his able associates, Dr. Albert Weinstein and Dr. Addison Scoville, Jr., the appreciation of the membership for their continued superior work. We move the adoption of this report."

ACTION: ADOPTED

Report of the Chairman of the Board of Trustees and Treasurer

"Your committee has reviewed the report of Dr. William O. Vaughan, chairman of the Board of Trustees and Treasurer. The committee is aware of and appreciative of the tremendous amount of work undertaken by the Board during the past year. In addition to the regular quarterly meetings of the Board, there was a called meeting and two Executive Committee meetings. The summary of the actions taken by the Board is indicative of the importance and diversity of the problems with which the Board has dealt. This committee speaks for the society as a whole in expressing its appreciation to the chairman and the entire Board of Trustees for their achievements. Each of the committees has received the total support of the Board in carrying out its projects. We particularly commend the Board for its financial as well as moral support of Dr. Charles C. Trabue's Legislative Committee, in successfully getting important bills through the legislature.

"This committee feels that the special breakfast during the annual meeting with the Public Service Committee and key community leaders is an outstanding advancement in further public education. This should do much toward improving the doctor image in the community.

"After reviewing the treasurer's report, we note with satisfaction that the Association is operating on a very sound financial

basis. Despite rising costs and a decrease of income from the JOURNAL, the Association operated within its budget with a substantial cash reserve at the end of the fiscal year. We move the adoption of this report."

ACTION: ADOPTED

Report of the Council

"Your committee has received the report of the chairman of the Council, Dr. Joe L. Raulston. We are pleased to note that problems of professional misconduct have been few.

"The committee appreciated the problem of the question of ethics with osteopaths and other nonmedical groups. It is suggested that the Board of Trustees act on any recommendations that might be presented by the Council in this area.

"We have noted the proposed changes on the map of the councilmanic districts and recommend that these be adopted when voted upon.

"The committee on behalf of the Association wishes to thank the Council for the tremendous amount of work it has done and we move the adoption of this report."

ACTION: ADOPTED

Report of the Executive Director

"Your Committee has reviewed the report of the Executive Director, Mr. J. E. Ballentine. The ever-increasing demands in socio-economics, scientific activities and improvement in legislative activities has been met with superior performance.

"In particular we wish to point out the success in the legislative field during the last session of the legislature whereby the Association was successful in achieving its goals in passage of the medical examiner act and the defeat of unfavorable legislation. The work of the staff in its fight against creeping socialism is noted and we are grateful for the intensified effort on their part towards defeat of such measures. The liaison with county medical societies is a noteworthy achievement, particularly their approach at the grass roots level.

"His suggestion for selection of a meeting place for the annual meeting be made three years in advance is noted. He pointed out that facilities in Nashville under present

conditions have become inadequate until the proposed auditorium becomes a reality.

"The recommendation of changing the organizational structure of the Association made last year and re-emphasized this year is worthy of serious consideration and we feel that the committee which has already been appointed by the Board of Trustees should implement the plan for realignment of organization activities of the TSMA as soon as feasible. With the ever-increasing complexity of the many functions of this Association these proposals are prudent and will further improve the efficiency of our Association.

"In conclusion we wish to commend Mr. Ballentine and his entire staff for their achievements and excellent performance of duties during the past year. We move the adoption of this report."

ACTION: ADOPTED

The report of the Reference Committee on reports of Officers was adopted as a whole.

The Speaker announced that the next order of business would be to hear the report of the Reference Committee on Reports of Standing Committees.

**Report of Reference Committee
on Reports of Standing Committees**

GEORGE K. HENSHALL, M.D., Chairman

The Reference Committee moved the adoption of the reports from the following committees: (1) Committee on Scientific Work; (2) Committee on Insurance; (3) Committee on Postgraduate Education (4) Memoirs Committee; (5) Advisory Committee to State Department of Public Welfare; (6) Public Service Committee; (7) Committee on Rural Health; (8) Committee on Tennessee Medical Foundation.

The Reference Committee noted that the Committee on Hospitals did not make a report and recommended that the committee render a report annually on physician-hospital relationships, as existing for the current year, and further that the third party relationships within the hospital structure be summarized.

The Reference Committee recommended adoption of the report of the Legislative and Public Policy Committee and the addendum to the report. It recommended that an offensive program in legislation be

conducted. The Reference Committee recommended that the suggestions offered in the report to be effectuated at the earliest possible time to combat socialized medicine in the state and in the nation.

The Reference Committee recommended adoption of the report of the Liaison Committee to the Public Health Department and further recommended that the committee represent TSMA in aiding the Advisory Committee to the Crippled Children's Service and the Public Health Council in formulating a proper fee schedule for the Crippled Children's Service.

The report of the Prepaid Health Insurance Committee was accepted. The Reference Committee urged that every effort be made to increase the number of participating physicians in the present Tennessee Plan.

The Reference Committee recommended adoption of the report of the Cancer Committee and further recommended that the Symposium Committee on Postgraduate Education be encouraged to have at least one program each year concerning some phase of cancer.

The Reference Committee recommended adoption of the Medicare program in Tennessee and of the report rendered. It was further suggested by the Reference Committee that the House authorize the Executive Committee of the Board of Trustees be given authority to "negotiate" the best and most feasible medicare contract obtainable.

No reports were rendered by the Committee on Hospitals and the Grievance Committee.

The report of the Reference Committee on Reports of Standing Committees was adopted as a whole.

The Speaker called for the report of the Reference Committee on Reports of Special Committees.

**Report of Reference Committee on
Reports of Special Committees**

H. P. CLEMMER, M.D., Chairman

The Reference Committee recommended the following special committee reports for adoption: (1) Consultative Committee on Prepaid Medical Care Plans; (2) Committee on Disaster Planning; (3) Committee on Industrial Health and Workmen's Compensation; (4) Liaison Committee to the United

Mine Workers of America; (5) Advisory Committee to the Woman's Auxiliary; (6) Committee on Blood Banks; (7) Committee on Mental Health; (8) Committee on Health Project Contest; (9) Tennessee Committee for the American Medical Education Foundation; (10) Committee on Youth and Education.

There were no reports from the following special committees: (1) Committee on Governmental Medical Services; (2) Committee on Tuberculosis; (3) Committee on Legal Relations and Interprofessional Code; (4) Committee on Sight Conservation; (5) General Liaison Committee.

The Reference Committee commended the Committee on Industrial Health and Workmen's Compensation for its outstanding efforts. Also, the Reference Committee recommended that TSMA combine efforts with its Auxiliary and cooperate with ministerial associations and other groups in taking aggressive leadership in preparing young people for marriage in accordance with the teaching of their respective faiths. This was included in the report of the Committee on Mental Health.

Special Reports

The Reference Committee on Reports of Special Committees recommended adoption of the report of the Woman's Auxiliary. The report commended the Auxiliary for an outstanding job, and especially Mrs. Robert L. Akin, President, for her effective presentation.

The Reference Committee recommended adoption of the report of the AMA delegation. The committee called upon the chairman of the delegation, Dr. D. W. Smith, to clarify the status of a substitute resolution contained in the report, after which, the report was approved and recommended for adoption with commendation.

The report of the Reference Committee on

Reports of Special Committees was adopted as a whole.

The Speaker pointed out the long and arduous work performed by the Reference Committees and stated that they had done an extraordinary job. The Speaker called for any other old business—there being none—he called for any new business to be presented. There was none.

Meeting in 1962

The Speaker stated that the 1962 annual meeting would be conducted in Memphis with headquarters at the Peabody Hotel. The dates for the meeting will be April 8-11, 1962.

Meeting in 1963

The Nashville and Davidson County delegation invited the Association to meet in Nashville in 1963 provided that adequate facilities to accommodate the Association were found to be feasible and acceptable. It was pointed out that if such facilities did not exist by 1963, an alternative invitation would be issued and that the final decision regarding the site of the 1963 meeting be left to the judgment of the Board of Trustees of TSMA. The invitation was accepted.

Dr. Chas. Smeltzer, Knoxville, arose and stated that if facilities in Nashville were not available, that an invitation was extended to the Association to meet in Knoxville in 1963. He pointed out that a new auditorium was practically completed and would be available for the Association's use.

A motion was duly made, seconded and adopted that the House of Delegates refer the selection of the meeting place in 1963 to the Board of Trustees.

There being no further business, the House of Delegates of the Tennessee State Medical Association adjourned at 11:55 a.m. sine die.

J. E. BALLENTINE
Executive Director

Abstract of Minutes of Council Meetings Tennessee State Medical Association Read House—Chattanooga—April 9-10, 1961

The Council of the Tennessee State Medical Association met at 9:30 a.m. Sunday, April 9, 1961 in the Read House, Chattanooga, Tennessee with the Chairman Dr. Joseph L. Raulston of Knoxville, presiding.

Councilors present were:

J. O. Hale, First District
J. L. Raulston, Jr., Second District
Donald H. Bradley, Third District
Thurman Shipley, Fourth District
Ben H. Marshall, Fifth District
Laurence A. Grossman, Sixth District
Wm. K. Owen, Seventh District
Frank A. Moore, Eighth District
R. David Taylor, Ninth District

The minutes of the preceding called meeting of the Council, conducted in Nashville, were read and approved.

The report of the Council to the House of Delegates was discussed by the Chairman. The Council unanimously approved the report.

A motion was made by Dr. Frank A. Moore, Jackson, seconded by Dr. Wm. K. Owen, Pulaski, to approve the proposed geographical change of the councilor district boundaries as proposed for remapping of the councilor districts. The motion was adopted.

The Chairman requested Councilor, J. O. Hale from the First District to investigate a postoffice employee panel of appointed physicians and to report his findings to the next meeting of the Council.

The Council members heard a request from the Anderson-Campbell County Medical Society, requesting that the society drop Anderson County from the society and be allowed to submit its charter to the House of Delegates and apply for a new charter for the Campbell County Medical Society. The request was approved.

The Chairman appointed the councilors from the third, fourth, sixth and seventh districts to investigate complaints in several areas and further named the councilor from the sixth district as chairman of such a committee. It was pointed out that this committee should seek the advice of the Execu-

tive Director and the legal counsel of TSMA whenever investigations are found to be necessary. It was requested that the committee make a report to the Council at the next interim meeting. There being no further business, the Council adjourned.

Respectfully submitted,

BEN H. MARSHALL, M.D., Secy.

Meeting of the Council April 10, 1961

The Council of TSMA met at 8:00 a.m. in the Greene Room of the Read House in Chattanooga on April 10, 1961. Members present were:

J. O. Hale, First District
J. L. Raulston, Jr., Second District
Donald H. Bradley, Third District
Ben H. Marshall, Fifth District
Laurence A. Grossman, Sixth District
William K. Owen, Seventh District
Frank A. Moore, Eighth District
R. David Taylor, Ninth District
Duane M. Carr, Tenth District

The first order of business of the Council was the election of a permanent Chairman for the forthcoming year since the previous chairman had retired. Dr. Frank Moore, Jackson, representing the Eighth Councilor District, was elected Chairman, and Dr. Wm. K. Owen, Pulaski, was elected Secretary.

Upon request, Dr. Joe Raulston, retiring chairman, suggested that a committee from TSMA might be formed by the House of Delegates to advise with small hospitals for the protection of the public and the profession's reputation.

The Chairman, Dr. Moore, stated that the Board of Trustees of TSMA had appropriated \$500 for the expenses of the Council in investigative work. The Council held a lengthy discussion as to ways and means in obtaining information concerning patients' records for scrutiny by the Council, Blue Shield, etc.

Chairman Moore suggested that the problems of the Council should be discussed at the local level and certainly in larger soci-

eties. It was his belief that much information and ideas could be obtained as to how to resolve problems.

Dr. J. O. Hale, Johnson City, discussed the matter concerning the size of lettering that should be required by law in front of any hospital. He stated that in several lo-

calities that the lettering on signs far exceed the limitations of law.

The Council directed that an interim summer meeting be conducted at the TSMA headquarters in Nashville.

Respectfully submitted,
WM. K. OWEN, M.D., Secretary

Minutes of the Second Quarter Meeting of the Board of Trustees, Tennessee State Medical Association Read House, Chattanooga, Tennessee, Wednesday, April 12, 1961—9:00 A.M.

The Board of Trustees of the Tennessee State Medical Association convened for the regular second quarter meeting following the TSMA annual meeting at 9:00 a.m., April 12, 1961, in the Read House at Chattanooga, Tennessee.

Members of the Board present were:

Robert M. Finks, M.D., Nashville, Chairman

John H. Burkhardt, M.D., Knoxville

Bland W. Cannon, M.D., Memphis

Carl C. Gardner, Jr., M.D., Columbia

R. H. Kampmeier, M.D., Nashville

Ralph O. Rychener, M.D., Memphis

Wm. J. Sheridan, M.D., Chattanooga

W. O. Vaughan, M.D., Nashville

Members of the Board absent were:

G. H. Berryhill, M.D., Jackson

Joseph W. Johnson, Jr., M.D., Chattanooga

Harmon L. Monroe, M.D., Erwin

Others present were:

Carroll H. Long, M.D., Johnson City

Mr. J. E. Ballentine, Executive Director, TSMA, Nashville

Mr. Jack Drake, Public Service Director, TSMA, Nashville

The regular second quarter session of the Board, following the annual meeting, was called to order by the Chairman, Dr. R. M. Finks. The minutes of the first quarter meeting, conducted on January 22nd, 1961, were approved as mailed to members of the Board.

The Board of Trustees conducted a preliminary meeting on April 11th, 1961, for the purpose of naming committees and selecting a chairman and vice-chairman of the Board. Dr. Robert M. Finks, Nashville, was named Chairman of the Board and Treasurer, and

Dr. Carl C. Gardner, Jr., Columbia, was named Vice-Chairman.

A motion was made by Dr. Rychener, seconded by Dr. Burkhardt, and adopted, that the following Board members be named to compose the Executive Committee. It was moved that the Nashville members of the Board, plus one from each of the other grand divisions of the State (East and West Tennessee) should compose the Executive Committee. Those named were: Dr. R. M. Finks, Dr. W. O. Vaughan and Dr. R. H. Kampmeier, Nashville (Representing Middle Tennessee); Dr. Wm. J. Sheridan, Chattanooga (Representing East Tennessee); and Dr. Bland W. Cannon, Memphis (West Tennessee).

It was determined that the Personnel Policies Committee of the Board should be discontinued and matters pertaining to personnel policy should henceforth be administered by the Executive Committee.

The Board appointed the Research and Planning Committee, naming Dr. John H. Burkhardt, Chairman, Dr. Wm. J. Sheridan and Dr. R. H. Kampmeier.

OLD BUSINESS:

(a) Dr. Rychener read a letter that he had written to Dr. James Hughes of Memphis, inviting him to appear before the Board of Trustees at this meeting, April 12th, to further explain the purposes of the proposed Tennessee Health Council. Dr. Hughes was not present and it was directed that the minutes show that the letter was presented to the Board.

(b) The 1960 financial audit was presented to the Board for examination and approval. A motion was made by Dr. Ry-

chener, seconded by Dr. Sheridan and adopted, that the financial audit be approved.

NEW BUSINESS:

1. Mr. Ballentine asked instruction from the Board as to the policy of attendance at national meetings when the chairman or a member of a committee could not attend, and when the committee chairman requested a member of the staff to substitute for him at a national meeting. Previously the Board had established travel funds for chairmen to attend important national meetings.

A motion was made by Dr. Rychener, seconded by Dr. Vaughan that staff personnel of TSMA may substitute for the Chairman only when he or other members of a committee could not attend and the chairman desired a TSMA staff member to attend a national meeting for information. It was urged that every effort be made for the chairman or members of a committee to attend such meetings before sending a staff person. The motion was adopted.

2. The first quarter financial statement for 1961 covering the fiscal operations of TSMA was presented for approval. Following study, a motion was duly made, seconded, and adopted that the First Quarter Financial Statement be approved. (A copy is included in the official minutes.)

3. Dr. Rychener read a letter to the Board that he had received from Dr. A. Roy Tyrer, concerning the National Foundation for Neuromuscular Diseases. Previously, the Board had taken action **not** to endorse this organization and since further information had been gathered by the Memphis and Shelby County Society, through their committee on Voluntary Health Agencies, it was the opinion of the Board that no change in policy should be made and that the previous action of the Board of Trustees on this question should be reaffirmed. A motion was made by Dr. Kampmeier, seconded by Dr. Burkhart, and adopted, that the Board's original action be reaffirmed. It was directed that a letter be written to Dr. Tyrer notifying him of the action of the Board of Trustees.

4. The Executive Director requested instructions from the Board as to the method of procedure in carrying out the provisions

of Amendment No. 1 adopted by the House of Delegates pertaining to the selection of a Nominating Committee by the Board of Trustees. In view of the action of the House in approving this amendment, the Board of Trustees is now empowered to select a Nominating Committee prior to the annual meeting. It was suggested that the President confer with the executive staff in the method of getting the delegates certified as early as possible in 1962, and the names be furnished to the members of the Board in order that a Nominating Committee could be selected well in advance of the annual session. (Amendment No. 1 is part of the official minutes.)

5. Dr. Carroll H. Long, Johnson City, President of the Tennessee Chapter, American College of Surgeons, appeared before the Board, stating that a regional meeting of the College of Surgeons would be conducted in Memphis in 1962 only ten days prior to the annual session of TSMA. He requested information as to the Board of Trustees' planning for the afternoon program usually presented by the Tennessee Chapter of the American College of Surgeons at the annual meeting. He desired to know whether the Board desired that the Tennessee Chapter of ACS conduct its meeting as usual. He also requested information as to space being assigned for conducting the ACS meeting.

The Board expressed the desire that the Tennessee Chapter of ACS to conduct its meeting as usual on Tuesday, April 10th, during the afternoon as customarily done in past years. Dr. Long was assured that adequate space would be provided at the annual meeting wherein the Tennessee Chapter of the American College of Surgeons could conduct its sessions in 1962.

6. Pertaining to Resolution No. 10, adopted by the House of Delegates, calling for the Board of Trustees to appoint a study committee to explore the facilities on a state-wide basis for nursing, convalescent, and custodial care facilities for older persons, the Board of Trustees designated that the Sub-Committee on Aging of the Public Service Committee be designated as the committee to make such a study. A motion was made by Dr. Cannon, seconded by Dr. Vaughan and adopted that the Sub-Commit-

tee on Aging serve as the study committee. (Resolution No. 10 is included and a part of the official minutes.)

7. The Board discussed how to implement Resolution No. 4 adopted by the House, which called for the appointment of appropriate committees in all county medical societies to obtain greater participation in the Tennessee Plan by physicians in each county. A motion was made by Dr. Cannon, seconded by Dr. Rychener, that Resolution No. 4 be implemented by every possible means to carry out the intent of the resolution. It was recommended that appropriate steps be taken by the Prepaid Insurance Committee to stimulate interest in the plan and also to take immediate steps to make necessary revisions in the fee schedule of the present Tennessee Plan to correct any inequities in the plan. The motion was adopted. It was also recommended that steps be taken to conduct further education of the medical profession in the state as to the purposes and need for the Tennessee Plan and the further education of doctors of the state as to how the plan operates. (Resolution No. 4 is included with the official minutes.)

8. Relative to the report of the Reference Committee on Reports of Officers, particularly the realignment of organizational activities as included in the report of the Executive Director, this matter was referred to the Research and Planning Committee of the Board with the request that a recommendation be presented from the committee at such time that it could report.

9. A motion was made by Dr. Vaughan, seconded by Dr. Burkhart and adopted, that the request be granted by the Rural Health Committee wherein Mr. Kenneth Cherry of the Tennessee Farm Bureau Federation be appointed to the Rural Health Committee, and Dr. Vernon Darter of the University of Tennessee Extension Service be added as a member of the committee. The motion was adopted.

10. The request contained in the report of the Consultative Committee on Administration of Prepaid Medical Care Plans was approved by the House of Delegates, an additional grant of \$2,000 was requested to continue the study being made by this committee. A motion was made by Dr. Cannon,

seconded by Dr. Gardner, and adopted, that prior to the granting of additional funds, that the Board of Trustees should obtain in writing from the committee an outline as to how additional funds would be spent and request the committee to explore all other methods of conducting the survey prior to the granting of additional funds. It was suggested that the committee study other sources and means of gathering the information required. The motion was adopted.

11. Since Amendment No. 2 to the By-Laws was adopted by the House of Delegates, defining the composition of the Legislative and Public Policy Committee, the Board proceeded to appoint the committee in keeping with the provisions of the amendment. The amendment called for appointment of one physician in each of the nine congressional districts of the state. Appointed to the basic nine-member committee for one year were: Dr. H. L. Monroe, Dr. Sam Hay and Dr. G. H. Berryhill; two-year appointments—Dr. Charles C. Smeltzer, Dr. John Speer and Dr. Byron O. Garner; three-year appointments—Dr. George K. Henshall, Dr. Douglas H. Riddell and Dr. Becket Howorth. In addition, the TSMA delegates to the American Medical Association were appointed to the committee on a one-year basis. They were: Dr. A. J. Ingram, Dr. D. W. Smith, and Dr. Smeltzer, who was an elected member of the committee. Others appointed for one-year terms included Dr. Perry Williamson, Knoxville; Dr. Harry Stone, Chattanooga; Dr. Chas. C. Trabue, IV, Nashville; Dr. John Twilla, Smithville; Dr. James Callis, Crossville; Dr. R. H. Elder, Cedar Hill; Dr. Carl Gardner, Columbia; Dr. Addison B. Scoville, Nashville; Dr. Thomas F. Frist, Nashville.

A motion was made by Dr. Cannon, seconded by Dr. Rychener, that the above committee be approved and that the Chairman of the Committee be permitted to add additional physicians from over the state if the business of the committee required it. The motion was adopted.

Dr. Douglas H. Riddell, Nashville, who was named Chairman of the Legislative Committee was designated as the key-man for national legislation in Tennessee and the Executive Director was instructed to inform the American Medical Association. (Amend-

ment No. 2 is included with the official minutes.)

12. The Board of Trustees concluded making appointments to standing and special committees of TSMA, naming those persons and additional committees that were not completed on the previous day in the meeting of the Board.

Committee appointments were completed with but one exception. Dr. Vaughan was given the assignment of appointing a chairman for the Public Service Committee after he had an opportunity to confer with several physicians in Nashville. Other committee appointments were completed.

13. The Board of Trustees designated the members of the General Liaison Committee to attend a future meeting to be called by organizers of the Tennessee Health Council. The General Liaison Committee would act as the official committee from TSMA to gather information and make a report to the Board.

The Board directed that Dr. John Hughes and Dr. Merritt Shobe, who are active in the organization of the Tennessee Health Council, be advised of the committee to represent TSMA. It was requested that the TSMA Committee be advised as far in advance as possible and the request should be to the effect that the meeting be well-publicized in advance.

14. A telegram from the President of the Tennessee State Labor Council was read. The telegram expressed the statements from the Labor Council pertaining to the Kennedy Administration's Social Security Bill for the Aged. A motion was made by Dr. Burkhart, seconded by Dr. Rychener, and adopted that Dr. W. O. Vaughan, President, reply to the telegram.

There being no further business, the meeting was adjourned at 12:30 p.m.

ROBERT M. FINKS, M.D., Chairman

J. E. BALLENTINE, Executive Director

**Minutes of the Meeting of the Board of Trustees
of the Tennessee State Medical Association—
Read House, Chattanooga, Tennessee
April 11, 1961**

The Board of Trustees of the Tennessee State Medical Association convened at the Read House in Chattanooga at 1:30 p.m. on April 11, 1961 for the purpose of making committee appointments of the standing and special committees for the year 1961-62.

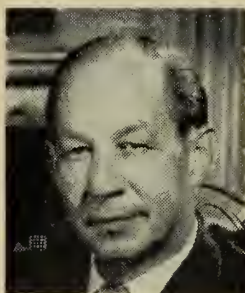
Prior to making the appointments, the Board heard Dr. Alvin J. Ingram, Memphis, read a letter requesting the TSMA to appoint a committee to attend a meeting proposed for the formation of a Tennessee Health Council. The Board of Trustees accepted and named the General Liaison Committee for this purpose.

In other action, the Board elected Dr. Robert M. Finks, Nashville, as Chairman of the Board of Trustees and Treasurer for 1961-62. Dr. Carl C. Gardner, Columbia, was named vice-chairman of the Board.

The Board adopted a motion to commend Dr. Charles C. Trabue, IV, for the outstanding work that he had performed as chairman of the Legislative and Public Policy Committee during the previous year. It was directed that a letter of commendation from the President be forwarded to Dr. Trabue.

The Board made the required appointments of all standing and special committees of the Association for the coming year.

President's Page



WILLIAM O. VAUGHAN,
M.D.

One of the pressing problems facing our Association is the expansion of physician participation in the Tennessee Plan.

There is now in excess of one million persons in Tennessee covered under the Tennessee Plan, underwritten by two Blue Shield organizations and thirty-nine commercial carriers.

At the inception, there were some 1,700 physicians participating in the plan at a time when the membership of TSMA was considerably less than at present.

In the last five years, participation by Tennessee physicians has steadily decreased to the extent that large groups of consumers of health insurance have brought to the attention of the Association the fact that not enough physicians participate in the plan to make it adequate to care for persons covered under the plan.

Approximately 50% of TSMA members participate in the plan and accept the fees listed as full payment for those persons meeting the requirements of the plan.

The following five provisions in the plan must be met in order to qualify for service benefits: (1) The protected persons must be within the eligible income limits (a protected person without dependents whose net income before payment of income taxes from all sources, does not exceed \$2400 per year; and a protected person with dependents whose aggregate family income does not exceed \$4200 per year, at the time of disability). (2) The protected person directs the company to pay the amount of the benefit to the physician or surgeon performing the operation. (3) The protected person does not have one or more insurance policies, in addition to the policy under which the claim is being made, that also provides benefits covering the services he or she received, for which the claim is being filed. (4) That the protected person or dependent does not receive third party injury benefits as the result of court trial or out-of-court settlement, nor does he have any claim pending for third party injury benefits. (5) That the insured certifies that his individual income, and/or family income is within the limits set out in the plan. For those who cannot meet these qualifications, the Tennessee Plan serves as an indemnity plan.

The House of Delegates in approving Resolution No. 4 directed that an appropriate committee be established in all county medical societies in Tennessee, and that they be urged to obtain greater participation in the plan by physicians in each county society.

In so doing, Tennessee physicians will be taking the most effective step possible to make prepayment plans work and to further repel government intervention into the field of medical care.

I am making a personal appeal to every physician in the state to cooperate with your Association and your local medical society and re-sign the participating agreement form in order that the Tennessee Plan can become a more realistic and serviceable instrument for the prepayment of medical care costs.

A handwritten signature in dark ink, reading "W. O. Vaughan".

President

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Address papers, discussions and scientific matter to R. H.
Kampmeier, M.D., Editor and Secretary, 8210 Vanderbilt
University Hospital, Nashville 12, Tennessee
Address organizational matters to Jack E. Ballentine,
Executive Director, 112 Louise Avenue, Nashville 5, Tenn.

R. H. KAMPMEIER, M.D., Editor and Secretary
Vanderbilt University Hospital, Nashville

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June, 1961

EDITORIAL

RADIATION HAZARDS

With new atomic energy being generated almost daily in all parts of the world by nations acquiring the nuclear reactors for the first time, an understanding of the potentialities of these agents is an obligation to society. It is of interest, therefore, to read the discussion of a panel meeting held at the New York Academy of Medicine.¹

All of us are exposed to a dose of natural background radiation. This comes in the main from three sources: (1) exposure to cosmic rays, (2) from the earth's crust, and (3) from the radioactive material inherent in the constitution of the body. The cosmic rays consist of charged heavy particles which enter the earth's atmosphere from outer space. These charged particles have

energies of many billions of electron volts. The great bulk of this activity is dissipated before the particles reach us. We receive gamma rays, (mesons and neutrons), which result when primary cosmic rays are absorbed in the earth's atmosphere.

The earth's crust contains large amounts of uranium, thorium, and potassium, and all of us are continually being bombarded by gamma rays from these sources, whether we are outdoors or indoors. For example, concrete used in construction, contains appreciable amounts of uranium. Brick is also such a potent source that living in a brick house is almost the equivalent of living outdoors. Rarely radiant heating in a building constructed of concrete may drive from the walls enough radon gas to be a measurable threat.

When one tries to estimate the dosage of exposure we must think in terms of a millirem. A millirem is 1/1000 of a roentgen unit, with which we are familiar. The average annual background dose due to cosmic ray is slightly less than 30 millirem a year. From the earth's crust we receive 45 to 50 millirem per year. The final source, internal radiation is less than 1 millirem per year. Therefore, each of us in the average receives 75 to 80 millirem a year.

The two areas of the body which are most vulnerable to this radiation are the gonads and the bone marrow.

From an even more practical aspect we must think about the exposure an individual receives as a consequence of diagnostic x-ray procedures. The average 14 x 17 chest film creates an exposure of about 15 millirem. The exposure from gastrointestinal diagnostic studies varies a good deal, depending on the amount of fluoroscopy.

Another source of radiation and impossible to estimate is weapons-testing. The two isotopes here involved are strontium 90 and cesium 137, both of which have relatively long half-lives.

The man-made dose is believed to be 1/2 to 5 roentgens, and the natural background dose over a thirty year period amounts to about 3 roentgens. If weapons-testing were to cease now the radioactivity already in the atmosphere would amount to 10 millirem per person.

The influence of radioactivity on the

¹Rall, J. E.; Dobzhansky, Th.; Hempelmann, L. H. Jr.; Laughlin, John S.; and Morgan, Russell H.: Radiation Hazard, Bull. New York Acad. Med. 36:804, 1960.

structure and function of the gonads and the characteristics of future generations is problematic. Its influence on bone and the future development of bone marrow disease is as yet not certain.

Since 1902, when a skin cancer was reported to have developed in an x-ray worker, it has been known that radiation exposure may carry certain hazards. Gamma rays were first used in the laboratory to produce experimental cancer in animals. Almost any tissue, under proper conditions, may be caused to undergo malignant changes. This is usually the result of repeated and chronic irradiation of small areas of the body with large doses of radiation, usually totaling several thousands of roentgens.

Five segments of the population have been studied under conditions approximating the above mentioned conditions. First, radiologists, who have been observed to have a higher incidence of leukemia than males of the same age group, in the general population, or in other medical specialists. On the other hand, the general incidence of cancer in this group is not greater than that of the general population.

The second group is the segment of the population in Japan in 1945, which was exposed to nuclear radiation at Hiroshima and Nagasaki. The leukemia rate was high in those individuals exposed to high concentrations of this atomic radiation.

A third group consisted of about 13,000 patients in England with ankylosing spondylitis who were treated with x-rays. In this group were found 32 definite and 5 probable cases of leukemia, when more than 500 roentgens were absorbed.

A fourth group comprises children treated in infancy for an enlarged thymus gland. Among 1700 children treated between 1925-1950, the incidence of leukemia was 10 times that of a comparable normal group, and the number of cases of thyroid cancer almost 100 times the expected.

The fifth group is composed of children exposed to radiation in utero when the mothers were given radiographic examinations during pregnancy. There is a very slight increase in cancer and leukemia in the exposed group.

There seems to be no yardstick which one

can apply to the influence of diagnostic radiation on the average individual from the standpoint of carcinogenesis.

One experiment involved several hundred women who received therapeutically 225 roentgen to the gonads. No major mutations have been noted among 600 progeny down to the second generation.

It is of interest that one of the panel members (Russell Morgan, Professor of Radiology at Johns Hopkins School of Medicine), thought that the chest x-ray mass surveys for detection of pulmonary cancer were not a fruitful procedure, since the number of cases picked up were not much greater than the potential number of cases of leukemia that might follow. When one adds to this fact the poor surgical and therapeutic results from radiation in the treatment of pulmonary cancer, Morgan believes the surveys should not continue. In addition, his group in Baltimore performed gastrointestinal examinations on 10,000 individuals over the age of 40, in an effort to pick up unsuspected neoplastic lesions. The yield was only about 1 per 1000, and accordingly the survey was abandoned.

A final plea was made that physicians should reduce the amount of diagnostic x-ray exposure, by more careful shielding of both the operator and the patient.

This panel discussion emphasizes the complexity of the problem and gives data that produce real cause for serious reflection.

A.W.

DEATHS

Dr. William David Poston, 76, Brownsville, died April 29th at his home.

Dr. Edward F. Buchner, Jr., 59, Chattanooga, died May 3rd in a Chattanooga hospital.

Dr. William Paxton Parker, 59, died April 17th in Boston. He was a former resident of Nashville.

Dr. Herbert C. Francis, 56, Professor and Chairman of the Department of Radiology, Vanderbilt University, School of Medicine, died at his home in Nashville, May 30.

PROGRAMS AND NEWS OF MEDICAL SOCIETIES

Roane County Medical Society

The Society met for its regular monthly meeting on May 30th at the Oak Ridge Hos-

pital. A dinner preceded the meeting. The speaker for the evening was Dr. Erle E. Peacock, Plastic Surgeon, from the University of North Carolina School of Medicine. His subject was "Reconstructive Surgery of the Hand."

Washington-Carter-Unicoi County Medical Society

The Society's monthly meeting was held jointly with the Washington-Carter-Unicoi Medical Auxiliary at the Town House in Erwin on May 9th. The speaker was Dr. Robert E. L. Berry, professor of surgery at the University of Michigan Medical Center, Ann Arbor. His subject was "Direct Arterial Surgery for Occlusive Arterio-Sclerotic Vascular Disease of the Lower Extremities and the Cerebral Circulation."

Nashville Academy of Medicine and Davidson County Medical Society

The Society conducted its regular meeting on May 9th at Vanderbilt Hospital. A dinner preceded the meeting in the cafeteria.

During the business session, the Academy members voted on amendments to the By-Laws, and combined quarterly meetings; discussed the physician's role in the medical care for the aging program, revisions in the Tennessee Plan and the physician's role in the Tennessee Plan.

The scientific program consisted of a Symposium on Endocrinology, Dr. Grant Liddle, moderator: "A Practical Test of Pituitary-Adrenal Responsiveness" by Dr. Liddle, associate professor; "Extra-Adrenal Malignancy as a Cause of Cushing's Syndrome," by Dr. Clifton K. Meador, instructor; and "Clinical Disorders Stemming from Excesses or Deficiencies of Aldosterone," by Dr. William S. Coppage, instructor, all from the Department of Medicine, Vanderbilt University School of Medicine.

Memphis-Shelby County Medical Society

The Society held its regular meeting on March 7th in the Institute of Pathology. The scientific program consisted of a symposium entitled "Recent Developments in Plastic Surgery." Panel participants were Dr. Anthony Jerome who spoke on Plastic Substances in Plastic Surgery"; Dr. Robert Reeder—"New Technics in the Treatment of

Burns"; and Dr. James Walker—"Use of Pedicle Tissue in Plastic Surgery."

Following the symposium, Dr. Hugh Smith presented a paper entitled "Medical Payola."

Marshall County Medical Society

The Marshall County Medical Society met on April 25th at the Southland Cafe in Lewisburg. Dr. Joe Gordon, president of the society, presented the program. His subject was "The Medical Treatment of Peptic Ulcers."

At the meeting of the society on May 16th, the program was under the direction of Dr. H. A. Morgan, who presented the speaker of the evening, Dr. Jack Swan, who is affiliated with the U.S. Public Health Service and assigned to the State of Tennessee. Dr. Swan's address was entitled "Rheumatic Fever Control Program."

Hawkins County Medical Society

At a recent meeting, the Hawkins County Medical Society went on record as being opposed to the bill to provide medical care for the aged through social security taxes.

Consolidated Medical Assembly of West Tennessee

The Society met in the New Southern Hotel in Jackson on May 2nd. The program was presented by Dr. Baker Hubbard who moderated a discussion by six panelists. Dr. Julian K. Welch, Brownsville, spoke on the organization of TSMA, and Dr. John R. Thompson, Jackson, discussed public service. Legislative activities were brought up to date by Dr. G. H. Berryhill, Jackson. Dr. H. P. Clemmer, Milan, spoke on the prepaid insurance plan, and Council activities were discussed by Dr. David Taylor of Dyersburg. Dr. Lam B. Myhr, Jackson, discussed activities of welfare care.

Sullivan-Johnson County Medical Society

The Sullivan-Johnson County Medical Society met in Kingsport on April 13th where physicians from Kingsport, Mountain City and Bristol were in attendance. The guest speaker was Dr. Sam Stephenson, Jr., assistant professor of surgery, Vanderbilt University, Nashville. Dr. Stephenson's topic was "Newer Surgical Approaches to Peptic Ulcers."

Northwest Tennessee Academy of Medicine

The Society was host to the West Tennessee Medical and Surgical Association on May 25th at Dyersburg. The program was held at the Country Club, where a number of speakers appeared on the program running throughout the afternoon and evening. A complete program is listed in this issue of the JOURNAL under "Medical News in Tennessee."

Greene County Medical Society

The Society met for its regular monthly meeting at the Elks Club on May 2nd. Dr. Haskell W. Fox, presided. Dr. Robert S. Cowles, Jr., program chairman, introduced the guest speaker, Dr. Ben Hall, internist, of Johnson City, who spoke on the subject "Neuromuscular Disturbances of the Colon."

In the business session of the meeting, Dr. Robert Bottomly, delegate from Greene County to the TSMA House of Delegates, reported on actions of the House of Delegates. The secretary of the society discussed the contents of three resolutions sent to him by the State Association for presentation to the society.

NATIONAL NEWS

The Month in Washington

(From the Washington Office, AMA)

The American Medical Association branded as untrue certain statements by Abraham Ribicoff, Secretary of Health, Education and Welfare, concerning the Administration's legislative proposal to provide medical care for the aged under Social Security. Dr. F. J. L. Blasingame, AMA Executive Vice President, presented a point-by-point rebuttal in a letter to the more than 500 editors from throughout the country after Ribicoff addressed the annual meeting of the American Society of Newspaper Editors in Washington.

Dr. Edward R. Annis, Miami surgeon representing the AMA, accused Ribicoff of misrepresenting the role of doctors under the administration proposal. Dr. Annis answered Ribicoff on a radio-television pro-

gram with Sen. Kenneth B. Keating (R., N.Y.) which was taped in Washington. Ribicoff had made the misrepresentation of an earlier Keating program.

Dr. Blasingame said Ribicoff's statement before the editors that physicians are not included in the administration proposal, the King bill, "simply is not true." The AMA official pointed out that the bill includes interns and residents in teaching hospitals as well as pathologists, radiologists, physiatrists, and anesthesiologists working in hospitals or serving hospitals' outpatient clinics.

"Mr. Ribicoff further claims that the King bill provides free choice of hospital physician," Dr. Blasingame said. "The fact is only hospitals signing contracts with the federal government would be available to patients. If the only hospital in a community was not approved by the Secretary of HEW, patients in that community would be forced to seek hospitalization in some other city. That would not afford free choice of hospital. If the patient's physician was not on the staff of the other hospital, the patient would be denied free choice of physician."

Dr. Blasingame also disputed Ribicoff's contention that the King bill is not socialized medicine.

"By common definition, any scheme which calls for a system of compulsory health care which is administered, financed, and controlled by the federal government is socialized medicine for that segment of the population it serves."

Rep. Walter H. Judd (R., Minn.), who is a physician, was quoted as one of a number of House and Senate members who agree with the AMA: "The public has been led to believe that they can get government financing without government control and ultimate government operation of medical services. It is naive for anyone to believe that Congress will take the people's money away from them through taxes and then allow the money to be spent by someone else without the Congress maintaining its own firm control."

Pointing out that the nation's physicians always have been in favor of medical care for all regardless of ability to pay, Dr. Blasingame said: "It seems strange to us that Mr. Ribicoff continues to lobby for the King

bill while completely ignoring the Kerr-Mills law, passed by Congress last year with strong support by the nation's physicians.

"The Kerr-Mills Law enables the states to guarantee to every aged American who needs help the health care he requires. And the states are implementing the law with unprecedented swiftness."

Dr. Annis pointed out on the radio-television program that "doctors would work for the government by working for the hospitals under contract to the government." He said those doctors would work "under rules, regulations and controls prescribed and laid down" by the HEW.

★

A new bill to encourage physicians and other self-employed persons to set up their own retirement plans started through Congress with approval of the House Ways and Means Committee.

Bearing the same number, H.R. 10, as a similar bill which died in Congress last year, the new measure would permit a self-employed person to defer taxes on income placed in a private retirement program. The special treatment would be limited to \$2,500 or 10 per cent of income each year, whichever is smaller.

Such income could be invested in qualified pension trusts, annuity programs, profit-sharing plans or a new type of non-transferable government bonds redeemable when the individual reaches retirement age or suffers disability.

An individual could start drawing benefits at age 59½ or earlier in the case of disability. A self-employed person would have to start drawing benefits by age 70½.

If a self-employed individual had more than three employees, he would be required to set up pension plans for them before he could benefit himself.

MEDICAL NEWS IN TENNESSEE

Tennessee Pediatric Society

The Tennessee Pediatric Society conducted its annual meeting May 14-16 at Lakeshore Lodge in Chattanooga.

The opening scientific sessions heard from

the following speakers: Dr. Lytt Gardner, professor of pediatrics, State University College of Medicine, Syracuse, New York; Dr. David Hsia, research director at Children's Memorial Hospital, Chicago; and Dr. C. Henry Kempe, professor of pediatrics, University of Colorado Medical Center, Denver.

A chromosome symposium was presented, followed by a business meeting of the Tennessee Chapter of the American Academy of Pediatrics, with Dr. Jack Chesney presiding. The symposium was concerned with recent advances in knowledge of the chromosome field, which involves inherited defects such as mongolism.

Dr. Albert M. Jones, Memphis, was elected president of the society at the conclusion of the scientific program. Dr. Jones is assistant professor of pediatrics at the University of Tennessee College of Medicine. He succeeded Dr. Felix G. Line, Knoxville. Other new officers are: Dr. Pope B. Holliday, Chattanooga, vice president, and Dr. William Crook, Jackson, secretary-treasurer.

Middle Tennessee Medical Association

The Society met on May 18th at the McMinnville Country Club, McMinnville, Tennessee. Installed as president of the Association was Dr. John T. Mason, McMinnville, succeeding Dr. Thayer Wilson, Carthage. Installed as secretary-treasurer was Dr. Arnold Meirowsky, Nashville.

Several mid-state doctors presented papers, showed films and slides and led discussions during the program. Among them were: Drs. Phillip P. Porch, Fred Goldner, Kirkland Todd, Charles MacMillan, David Scheibert, Joe Burd, Norman Whitthour, Roy Parker, Charles Hamilton, Andrew Miller, David Law, Oscar Noel, Crawford Adams and Harold Collins.

The address of the retiring president entitled "Social Security for Physicians from a Different Angle" was followed by talks by Mr. Joe Miller, field representative of the American Medical Association, and Mr. Jack Drake of the Tennessee State Medical Association.

Legislative Conference Conducted in Second District

An important medical legislative conference was conducted in Knoxville at the

Academy of Medicine Building on May 24th. The meeting was attended by physicians, members of the Woman's Auxiliary, dentists, medical assistants, lawyers and representatives of other groups.

Physician representatives from medical societies throughout the second congressional district were in attendance.

The program dealt entirely with some of the pressing problems and work to be accomplished concerning the care of the aged. A full explanation of the details of the proposed King Bill (HR 4222) and important aspects of the Kerr-Mills Law, now in effect, were presented at the conference. The following program was presented:

"Explanation of Scope and Purpose of Conference," by Jack Chesney, M.D., President, Knoxville Academy of Medicine; Report: "Present Status of Health Needs of Elderly Persons and Their Ability to Finance the Cost of Their Health Care," by Mr. Leonard Martin, Director, Department of Economic Research, American Medical Association; "Medicine's Positive Approach to the Problem of Health Care for the Aging," by Harmon L. Monroe, M.D., Past-President, Tennessee State Medical Association; "Explanation of King-Anderson Bill and Comparison with Kerr-Mills Law," by Perry Williamson, M.D., TSMA Legislative and Public Policy Committee. "The King-Anderson Bill—Better or Poorer Hospital Care?" by Mr. Harold Peterson, Administrator, Erlanger Hospital, Chattanooga.

Address by F. J. L. Blasingame, M.D., Executive Vice-President, American Medical Association, "Outline of County Society Legislative Activity Program," by Mr. Joe D. Miller, Field Representative, American Medical Association; "Briefing on Second Congressional District Situation," by Charles C. Smeltzer, M.D., TSMA Legislative and Public Policy Committee; "Analysis of Arguments Offered by Proponents of King-Anderson Bill," by Mr. Warren Whyte, Law Department, American Medical Association.

Question and answer period.

The conference was attended by 93 persons.

West Tennessee Medical and Surgical Association

The Association conducted its semi-annual

meeting on May 25th at the Dyersburg Country Club. The following scientific program was presented: "Closure of Traumatic Wounds of the Hand," J. T. Davis, M.D., Corinth, Miss.; "Tuboplasty for Sterility," by Allen Truex, M.D., Jackson, Tenn.; "Prolapsing Gastric Polyp," by J. E. Neumann, M.D., and W. G. Rhea, M.D., Paris, Tenn.; "Space Medicine and the Missile Program," by Col. Harry C. McLean (MC) Redstone Arsenal, Huntsville, Ala.; "Surgical Management of Endometriosis," by Sam C. Cowan, Jr., M.D., Nashville; "Carotid Surgery," by Bland Cannon, M.D., Memphis.

Presentation—Merril D. Hines, M.D., Medical Director and Head of Proctology Section, Ochsner Clinic; President, American Proctological Society, New Orleans, Louisiana.

Tennessee Radiological Society

The Society recently elected the following officers: President, 1961, Dr. Edward H. Mabry, Memphis; President-Elect, Dr. M. D. Ingram, Nashville; Vice-President, Dr. James J. Range, Johnson City, and Secretary-Treasurer, Dr. B. M. Brady, Memphis. Councilor nominated for the American College of Radiology is Dr. Walter Scribner of Kingsport.

State of Tennessee Department of Public Health

SPECIAL LETTER

TO: DOCTORS OF MEDICINE IN
TENNESSEE

SUBJECT: Laboratory Services for Aid in
the Diagnosis of Enterovirus
Infections including Polio, Cox-
sackie, and ECHO Viruses

With the approach of the summer months an increase in the incidence of infections with the polio, Coxsackie, and ECHO viruses will no doubt occur.

As you know, these enteroviruses are similar in many ways and can cause illnesses so similar that it becomes impossible to diagnose them clinically. All can cause a nonspecific febrile illness ("summer flu"), the aseptic meningitis syndrome, and an encephalitic-like disease. In addition, Coxsackie viruses cause herpangina, epidemic pleurodynia, myocarditis, or encephalomyocarditis, and a febrile disease with a rash

resembling measles. ECHO viruses also cause an illness with rash, encephalitis, and summer diarrhea in children. Both the Coxsackie and ECHO viruses have been found to be present in patients with varying degrees of paralysis.

Because of this great overlapping of symptoms, even paralytic illnesses can no longer be clinically diagnosed as poliomyelitis with certainty. The Central Laboratory of the Tennessee Department of Public Health is equipped to be of great aid to physicians in the diagnosis of these viral illnesses. By means of tissue culture technique and serologic tests, isolation and identification of the viruses can be done if specimens are collected and submitted properly.

Note instructions for submitting specimens for viral studies. Several points should be emphasized:

- 1) A request form, #600, must accompany each specimen with the suspected diagnosis thereon.
- 2) For isolation of a virus, stools, spinal fluid, and throat washings are all possible sources. They must be collected *early* in the disease, frozen immediately, and be kept frozen until they reach the laboratory.

Note: By contacting your local health department you may obtain aid in shipping these specimens to the laboratory in a frozen state.

- 3) For complement fixation tests, both acute and convalescent serum specimens should be submitted. The first specimen should be collected soon after the onset of illness and the second two to three weeks later.

Note: Because of the many types of Coxsackie and ECHO viruses, only isolation studies will be carried out for these viruses unless: (a) a virus is isolated from the patient, or (b) there is an outbreak and a virus is isolated from at least one of the patients. In these two instances the sera of the patient or patients will be examined for antibodies to the virus isolated.

In general, these tests require approximately two weeks to complete. Obviously this may not help you in the early diagnosis of a specific case, but it is well to know what viruses are present in a community. Only by making certain of the diagnoses will we be able to learn more about the diseases. Therefore, we urge you strongly to use the facilities available to you.

Yours very truly,
R. H. HUTCHESON, M.D.
Commissioner

INSTRUCTIONS FOR SUBMITTING SPECIMENS FOR VIRUS STUDIES

General Instructions:

1. Fill out request Form 600 to accompany each specimen.

2. Never freeze blood specimens.
3. Always freeze other specimens and send to laboratory in frozen state.
4. Be sure to designate on request form the infection suspected. Be specific.
5. Do not fill bottle so full that freezing will break it.
6. All specimens should be sent to Division of Laboratories, Cordell Hull Building, Nashville.

Enteroviruses, Including Poliomyelitis

1. *Stool specimen for culture is necessary and is the best source for isolation of virus.*
 - (a) Obtain as early as possible for isolation of the virus.
 - (b) Put feces in one-ounce screw cap specimen bottle.
 - (c) Freeze and keep in frozen state until it reaches the laboratory.
2. *Nasopharyngeal washing.* (Of some value in poliomyelitis. Of great value in other enteroviruses.)
 - (a) Obtain as early as possible.
 - (b) Collect by using sterile saline or nutrient broth as a gargle, by washing the nasal passages with a syringe containing the fluid, or by swabbing the naso-pharynx and placing the swab in the solution.
 - (c) Place in one-ounce screw cap specimen bottle.
 - (d) Freeze immediately and keep in frozen state until it reaches the laboratory.
3. *Spinal fluid culture.* (Of no value in poliomyelitis. Of great value in other enteroviruses.)
 - (a) Obtain as early as possible.
 - (b) Put in one-ounce screw cap specimen bottle.
 - (c) Freeze immediately and keep in frozen state until it reaches the laboratory. Of no value unless frozen.
4. *Paired blood specimens.* (Because of shortage of antigens, neutralization tests will not be done for Coxsackie and ECHO viruses unless the virus is isolated from a stool specimen.)
 - (a) Take first specimen as soon as possible, preferably in first three days after onset.
 - (b) Obtain second specimen two to four weeks after onset.
 - (c) Use regular blood vial.
 - (d) Chill but do not freeze.
 - (e) Send in whole blood.
5. *Autopsy material.*
 - (a) Obtain material as aseptically as possible from cortex, brain stem, cervical cord, and heart muscle.
 - (b) Freeze immediately and send to the laboratory in a frozen state.

Other Viruses

1. *Paired blood specimens.*
 - (a) As directed above.
 - (b) Chill but do not freeze.
2. *Nasopharyngeal washing.*
 - (a) As directed above.
3. *Autopsy material.*
 - (a) As directed above.

PERSONAL NEWS

Dr. Cecil B. Tucker, Nashville, Director of the Division of Preventable Diseases, Tennessee Department of Public Health was recently elected President of the Conference of State and Territorial Epidemiologists.

Two Nashville physicians, **Dr. Amos Christie** and **Dr. Sarah H. Wood Sell**, have been elected to the Section on Diseases of the Chest of the American Academy of Pediatrics.

Dr. William A. Garrott, Cleveland, recently addressed the Sweetwater Valley Woman's Medical Auxiliary at Sweetwater.

Dr. Laurence W. Jones, Union City, has been installed as president of the West Tennessee Heart Association.

Dr. Maurice S. Rawlings, Chattanooga and **Dr. Carl C. Gardner, Jr.**, Columbia, were elected to Fellowship, and **Dr. Robert E. Mabe**, Chattanooga and **Dr. Charles L. Neely, Jr.**, Memphis, to Association in the American College of Physicians at its recent meeting in Miami Beach, Fla.

Dr. William M. Keeling, Knoxville, has been awarded a Fellowship in the International College of Surgeons.

Dr. Edward Joseph Jarboe, Memphis, is now associated on the staff of the South Pittsburg Municipal Hospital.

Dr. James L. Johnson, Lewisburg, announces his association with the Veterans Administration Hospital in Murfreesboro.

Four Nashville physicians recently presented papers at the International Academy of Pathology and the American Association of Pathologists and Bacteriologists in Chicago. They were: **Drs. John B. Thomison, Harold L. Moses, William J. Cheatham** and **Robert V. Russell**.

Dr. William B. Acree, Ridgely, has been named medical examiner for Lake County.

Three Memphis physicians recently presented papers at the International Academy of Pathology and American Association of Pathologists and Bacteriologists. They were: **Drs. W. S. Gilmer, Jr., R. E. Tooms, and J. E. Salvatore**.

Dr. Rudolph M. Landry, Chattanooga, has been elected a vice-president of the Association of Surgeons of the Southern Railway System. Other Chattanoogaans elected were **Dr. J. Marsh Frere, Sr.**, and **Dr. Cecil Newell**.

Dr. Jean Hawkes, Memphis, has been elected to the County Board of Education of Shelby County.

Dr. Arthur K. Husband, Hendersonville, North Carolina, has joined the Cumberland Clinic Foundation staff at Crossville.

Dr. C. C. Johnson, Rogersville, has been appointed a member of the Rogersville Housing Authority.

Dr. David J. Slagle, Elizabethton, has been named president of the Civitan Club.

Dr. Wade Boswell, Knoxville, is president-elect of the Tennessee Psychiatric Association.

Dr. Cyrus C. Erickson, Memphis, recently gave a paper before the meeting of the Minnesota State Medical Society.

Dr. Charles D. Ray, Memphis, addressed the Memphis Chapter of the Institute of Radio Engineers Professional Group on Bio-Medical Electronics.

Dr. Parker D. Elrod, Centerville, recently spoke before a group at Freed-Hardeman College.

Dr. John M. Hickey, Sevierville, has been elected president of the Optimist Club.

Drs. Thomas C. Delvaux, David Gotwald and **Frank C. Womack**, Nashville, announce the association of **Dr. J. M. Phythyon** for the practice of anatomic and clinical pathology at Pathologists' Laboratory in the Mid-State Medical Center Building.

Dr. John P. Kinnard, Jr., has joined **Dr. O. A. Crouch, Jr.**, Nashville, in the practice of internal medicine and neurology.

Dr. E. M. Henderson, Rogersville, has been elected chief of staff of the Hawkins County Memorial Hospital Medical Staff. **Dr. W. L. Goforth** was elected vice-chief of staff and **Dr. Henry Lyons** elected secretary.

Three Chattanooga physicians, **Drs. William E. Van Order, Joseph V. LaVecchia** and **Stewart P. Smith**, have opened the pediatric clinic in Chattanooga.

Dr. David H. Turner, Chattanooga, recently addressed the Physicians Assistants Association.

Dr. J. E. Acker, Jr., Knoxville, recently addressed the Middle Tennessee Heart Association in Nashville.

Dr. Thomas F. Frist, Nashville, has been installed as president of the Middle Tennessee Heart Association.

Dr. A. C. Broyles, Dayton, was a recent guest speaker at the Dayton Rotary Club.

Dr. David Dunavant, Memphis, Chairman of the Traffic Safety Committee of the Memphis and Shelby County Medical Society, presented information before the Tennessee Legislative Council in Nashville on May 20th.

Dr. David E. Rutledge, Hohenwald, has purchased the Boyce Clinic.

Dr. John C. Beard, Memphis, was a recent speaker before the Millington Exchange Club.

Dr. H. L. Monroe, Erwin, has accepted the chairmanship of the Unicoi County Red Cross Blood program.

Dr. James W. Walker, Memphis has been certified as a diplomate of the American Board of Plastic and Reconstructive Surgery.

Dr. R. H. Kampmeier, Nashville, recently addressed the Birmingham Internists' Society.

Dr. Bertram E. Sproffkin, Nashville, announces the removal of his office from Vanderbilt University Hospital to the Medical Arts Building, for the practice of neurology.

Dr. Marvin R. Batchelor, Cleveland, recently addressed the Bradley County Medical Society Auxiliary.

Dr. E. Converse Peirce, Knoxville, has received a \$75,000 grant from the National Institute of

Health. The grant will be used to further develop the technic of differential hypothermia using a pump-oxygenator.

Chattanooga physicians participating recently in radio and TV programs include: **Drs. Stewart Lawwill, Jr., Thomas C. Monroe, C. Robert Clark, James H. Spaulding, John M. Crowell, Robert W. Boatwright, C. Windom Kimsey, Robert C. Thompson, Paul Johnson, Jr., Alfred P. Rogers, R. A. Hoppe, and Charles J. Ray.**

Dr. Richard P. Ownbey, of the Mayo Clinic, has joined **Drs. Ivie, Beveridge, Greer and Tanner**, Nashville, in the practice of radiology.

ANNOUNCEMENTS

Upper Cumberland Medical

The Upper Cumberland Medical Society will hold its annual meeting on June 20-21, 1961 at Red Boiling Springs, Tennessee.

The Aging Patient

A panel of physicians and scientists recently reviewed current knowledge of aging and the aging patient. Topics covered ranged from therapeutic and dietary needs of the older patient to special examination and diagnostic procedures.

Participating in the discussion were: **Dr. Geoffrey H. Bourne**, Professor and Chairman of the Department of Anatomy, Emory University, Atlanta, Georgia, moderator; **Dr. Joseph T. Freeman**, President of the Gerontological Society, Inc. and

an internal medicine specialist, Philadelphia, Pennsylvania; **Dr. Albert R. Behnke, Jr.**, Director of the Institute of Applied Biology, Presbyterian Medical Center, San Francisco, California; **Dr. Nathan W. Shock**, Chief, Gerontology Branch, National Heart Institute, National Institutes of Health, Baltimore, Maryland; **Dr. Joseph H. Gerber**, Director, and **Dr. Stanley R. Mohler**, Medical Officer, Center for Aging Research, National Institutes of Health, Bethesda, Maryland.

Copies of the text of **THE AGING PATIENT**—the recording made of this session by the *Voice of Medicine*, the recorded medical journal of the Excerpta Medica Foundation—are available free upon request to: Information Officer, Center for Aging Research, Division of General Medical Sciences, National Institutes of Health, Bethesda 14, Maryland.

American Heart Association

The 1961 Annual Meeting and Scientific Sessions of the American Heart Association will be held in Bal Harbour, Miami Beach, Fla., October 20-24. The 34th annual Scientific Sessions are scheduled from Friday, October 20, through Sunday, October 22, in the Americana Hotel.

May 15 has been set as the deadline for submitting abstracts of papers to be presented at the Scientific Sessions. Papers intended for presentation must be based on original investigations in, or related to, the cardiovascular field. Official forms for submitting abstracts may be obtained from **Richard E. Hurley, M.D.**, Medical Associate, American Heart Association, 44 East 23rd Street, New York 10, N. Y.

ERRATUM (See May Issue)

The cuts of Figure 4 (page 143) and Figure 2 (page 148) were transposed.

CONSTITUTION AND BY-LAWS OF THE TENNESSEE STATE MEDICAL ASSOCIATION

CONSTITUTION

ARTICLE I

Name of the Association

The name and the title of this organization shall be "The Tennessee State Medical Association."

ARTICLE II

Purposes of the Association

The purposes of this Association shall be to federate and to bring into one compact organization, through the component societies, the medical profession of the State, and to unite with similar associations in other states to form the American Medical Association.

The aims of this association shall be:

1. The extension of medical knowledge, the advancement of medical science, the maintenance of medical ethics, and the competence of the art of medical practice.
2. The elevation of the standards of medical education.
3. The enforcement of just laws that have to do with the health and welfare of the people of this State.
4. The promotion of friendly intercourse among physicians, and the guarding and fostering of their material interests.
5. The enlightenment and direction of public opinion in regard to the problems of health and medical care, and the promotion of understanding between the public and the medical profession.
6. To make the medical profession of the State more capable and honorable within itself and more useful to the public in the prevention and cure of disease and in prolonging and adding comfort to life.

ARTICLE III

Component Societies

Component Societies shall consist of those local Medical Societies which hold charters from this Association.

ARTICLE IV

Composition of the Association

SECTION 1. This Association shall consist of Active Members, Associate Members, Veteran Members, Honorary Members, and Student Members.

SEC. 2. The Active Members of this Association shall be active members of the Component Medical Societies who have been certified to the Secretary of this Association and whose dues have been paid for the current year.

SEC. 3. Associate members shall be commissioned officers in active service of the U. S. Armed Forces, Veterans Administration, and Public Health Service, residing in the State, who are elected to membership by a Component Society and certified to the Secretary of the State Association as Associate Members. Such physicians may be eligible for active membership, if otherwise qualified.

SEC. 4. Veteran Members are those who, because of age or impaired health, have been elected Veteran Members of their Component Societies, and who are so certified to the State Association annually by the Component Societies.

SEC. 5. An Honorary Member is one who is a member of another State Association, or other reputable society, who is pre-eminent in general or special scientific work, whose name, with detailed information concerning his education and professional qualification, is presented in writing by three members of this Association, and who is elected by a two-thirds vote of the House of Delegates.

SEC. 6. A Student Member is any student regularly and duly enrolled in a medical school in Tennessee and who is a candidate for the degree of Doctor of Medicine, and who is certified by his Component Medical Society.

ARTICLE V

House of Delegates

The House of Delegates shall be the legislative and business body of the Association, and shall consist of (1) Delegates elected by the Component Societies; (2) ex-officio the Officers; (3) the five most recent surviving ex-Presidents of the Association, except that all ex-Presidents who were living in April 1956 shall be members for life; (4) the Associations delegates to the American Medical Association, the Commissioner of Public Health, and the Commissioner of Mental Health for the State of Tennessee, provided such Commissioner of Public Health or Mental Health is a member in good standing of the Tennessee State Medical Association.

ARTICLE VI

Sections

The House of Delegates may provide in the By-Laws for a division of the scientific work of the Association into appropriate Sections as the need may arise.

ARTICLE VII

Annual Meetings of the Association

The Association shall hold an Annual Meeting at such time and place as provided in the By-Laws, and the Scientific Meetings shall be open to all registered members and guests.

ARTICLE VIII

Officers

SECTION 1. The officers of the Association shall be a President, President-Elect, a Vice-President for each of the three grand divisions of the State, a Secretary-Editor, the six elected Trustees, ten

Councilors, a Speaker of the House of Delegates, and a vice-speaker of the House of Delegates.

SEC. 2. The Board of Trustees shall consist of the President of the Association, the Speaker of the House of Delegates, the immediate Past-President, the President-Elect, the Secretary-Editor of the Journal, and six members elected by the House of Delegates as hereinafter provided.

Six members of the Board of Trustees shall be elected by the House of Delegates, two from each grand division of the State, and no two will be from any one component society.

The elected Trustees shall serve for a period of three years and no Trustee shall be eligible immediately to succeed himself. The Board of Trustees will organize by the election of a Chairman. The Chairman of the Board of Trustees shall be ex-officio Treasurer of the Association.

SEC. 3. There shall be one Councilor for each Councilor District and such Councilor Districts shall coincide with the Congressional Districts for the State of Tennessee in the year 1948. The Councilors shall be elected for a term of two years, in the following manner: Councilors from odd numbered districts will be elected in even calendar years and Councilors from even numbered districts will be elected in odd calendar years. No Councilor shall serve more than four consecutive years.

The Council shall organize annually by the election of a Chairman and a Secretary.

SEC. 4. The President-Elect, the three Vice-Presidents, the Secretary-Editor and the Speaker of the House of Delegates shall be elected annually for one year, and the Speaker of the House shall hold office for not more than four consecutive years. The President-Elect shall assume office as President at the expiration of the term of the President.

SEC. 5. The President, Secretary, and Speaker of the House of Delegates shall be ex-officio members of the Council.

SEC. 6. Every officer shall hold office until his successor is elected and assumes office.

SEC. 7. All officers of the Association, except the Councilors, shall be elected at the second regular session of the House of Delegates, and they shall assume office when elected.

SEC. 8. No member who has not been a member in good standing for five years next preceding election, or who is not in attendance at the meeting, shall be eligible for election as President-Elect or Vice-President.

ARTICLE IX

The Powers and Duties of the Board of Trustees

SECTION 1. The Board of Trustees shall have entire control of the publication, the policy and the editorial and financial management of the Journal of the Association. It shall be authorized and empowered to make all contracts necessary for the conduct of the Journal.

SEC. 2. The Treasurer of this Association shall be the custodian of all the funds of the Association.

SEC. 3. The Board of Trustees shall hold semi-annual meetings, one of which shall be held on the last day of the Annual Meeting, and such other meetings as the business of the Association may require, subject to the call of the Chairman. The Board of Trustees shall make expenditures of the funds of the Association dependent upon the availability of such funds as determined by the Board of Trustees and as ordered by the House of Delegates. The Board of Trustees shall render at the Annual Session a full and detailed accounting of all receipts and disbursements.

SEC. 4. In the event of a vacancy by death or resignation of any member of the Board of Trustees between the Annual Meetings of the Association, the Vice-President for that division of the State in which the vacancy occurs, shall serve as a member of the Board of Trustees until the next annual meeting.

SEC. 5. The Board of Trustees shall be the Executive Board of the Association to determine the policy and details of management between sessions of the House of Delegates.

SEC. 6. The Board of Trustees shall serve without compensation, except the Chairman; who is ex-officio the Treasurer, whose compensation shall be fixed by the House of Delegates; however, their actual expense in attending the meetings of the Board shall be paid out of the funds of the Association. This is not to apply where a meeting is held at the Annual Meeting.

ARTICLE X

Fiscal Year and Dues

SECTION 1. The fiscal year of the Association shall be from January 1 through December 31.

SEC. 2. The annual dues of Active Members shall be fixed in the By-Laws. No dues shall be paid by Veteran, Associate, Student, or Honorary Members. (Chap. IX.)

ARTICLE XI

Referendum

The General Meeting of the Association may, by a two-thirds vote of the members present and voting, order a general referendum upon any question pending before, or already decided by the House of Delegates. The House of Delegates may, by a similar vote of its own members, or after a vote of the general meetings, submit any such question to the membership of the Association for a final vote. If the persons voting shall comprise a majority of all the members registered at that Annual Meeting, a majority of such vote shall determine the question and be binding upon the House of Delegates.

ARTICLE XII

The Seal

The Association shall have a common seal, with the power to break, change or renew the same at pleasure, by action of the House of Delegates.

ARTICLE XIII

Amendments

The House of Delegates may amend any article

of this Constitution by a two-thirds vote of the Delegates registered at the Annual Session; provided that such amendment shall have been presented in open meeting at the previous Annual Session, and that it shall have been sent officially to each component Society at least two months before the Session at which action is to be taken.

BY - LAWS

CHAPTER I

Membership and Sections

SECTION 1. All Active Members, Associate Members, Veteran Members, Student Members, Honorary Members, and invited guests shall be privileged to attend all scientific meetings and take part in the discussion of all scientific questions, but Active Members and Veteran Members only shall be entitled to vote and hold office.

SEC. 2. A physician whose name is upon a properly certified roster of members, or list of delegates of a chartered component Society, which has paid its annual assessment, or an invited guest, is eligible to register at the annual meeting.

SEC. 3. No person who is under sentence of suspension or expulsion from any component Society of this Association, or whose name has been dropped from its roll of members shall be entitled to any of the rights or benefits of this Association nor shall he be permitted to take any part in any of its proceedings until such time as he has been relieved of such disability.

SEC. 4. Each member in attendance at the Annual Meeting shall enter his name on the registration book or card, indicating the component Society of which he is a member. When his right to membership has been verified, by reference to the roster of his society, he shall receive a badge, which shall be evidence of his right to all the privileges of membership at that meeting. No Member or Delegate shall take part in any of the proceedings of an Annual Meeting until he has complied with the provisions of this Section.

CHAPTER II

Annual and Special Meetings of the Association

SECTION 1. The Association shall hold an Annual Meeting beginning on Monday preceeding the second Tuesday in April, and at such place as has been fixed at the preceding Annual Session, but it is agreed that the meetings shall rotate annually to Middle, West, and East Tennessee.

The House of Delegates shall meet annually at the place of the Annual Meeting of the Association. It shall meet on Sunday preceding the second Tuesday of April and thereafter until its work is completed.

If the business interests of the Association require, it may meet in advance of or remain in session after the final adjournment of the general meeting, such extraordinary sessions being subject to the call of the Speaker of the House of Delegates.

SEC. 2. Special Meetings of either the Association or House of Delegates shall be called by the

President at his discretion or upon petition of twenty Delegates.

SEC. 3. If for any valid reason an Annual Meeting cannot be held on date as named, the President, the three Vice-Presidents, the Secretary, and the Board of Trustees may fix another date, provided the Secretaries of component Societies are notified as far in advance of the changed date as possible by the Secretary of the Association and, if time permits, each Member shall be notified by a personal communication mailed to his address.

CHAPTER III

General Meetings

SECTION 1. The General Meeting shall include all registered Active Members, Associate Members, Veteran Members, Student Members, Honorary Members and guests, all of whom shall have equal rights to participate in the proceedings and discussions. Each General Meeting shall be presided over by the President, or, in his absence or disability, or by his request, by one of the Vice-Presidents. Before it, at such time and place as may have been arranged, shall be delivered the Annual Address of the President and the annual orations; and the entire time of the meeting, so far as possible, shall be devoted to papers and discussions, clinics, and demonstrations, relating to scientific medicine.

SEC. 2. The General Meeting shall have authority to create committees or commissions for scientific investigation of special interest and importance to the profession and public, and to receive and dispose of reports of the same, but any expense in connection therewith must first be authorized by the House of Delegates.

SEC. 3. Except by special vote, the order of exercises, papers, and discussions as set forth in the official program, shall be followed from day to day until it has been completed, and all papers omitted shall be recalled in regular order.

SEC. 4. No address or paper before the Association, except the address of the President and invited guests, shall occupy more than twenty minutes in its delivery; and no Member may speak longer than five minutes, nor more than once on the same subject, provided each essayist be allowed five minutes in which to close the discussion.

SEC. 5. All papers read before the Society shall be its own property. Each paper shall be deposited with the Secretary when read.

CHAPTER IV

House of Delegates

SECTION 1. The House of Delegates shall meet annually at the time and place of the Annual Meeting of the Association. It shall meet on the Sunday preceding the second Tuesday in April and thereafter until its work is completed. If the business interests of the Association require, it may meet in advance of or remain in session after the final adjournment of the General Meeting, such extraordinary sessions being subject to

the call of the Speaker of the House of Delegates.

SEC. 2. Each component Society shall be entitled to send to the House of Delegates each year one delegate for every fifty active and veteran members and one for every fraction thereof, based upon the number of such members in the component Society in good standing as of December 1 of the year preceding the session of the House. Each component Society holding a charter from the Association, which has made its annual report and paid its assessment as provided in the Constitution and By-Laws, shall be entitled to at least one delegate.

SEC. 3. A majority of the registered Delegates shall constitute a quorum, and all the sessions of the House of Delegates shall be open to Members of the Association.

SEC. 4. From among members of the House of Delegates the Speaker of the House of Delegates, for the purpose of expediting proceedings, shall appoint Reference Committees to which reports and resolutions shall be referred. He shall also appoint a Committee on Credentials and such other committees as may be considered by him to be necessary.

SEC. 5. It shall elect representatives to the House of Delegates of the American Medical Association in accordance with the Constitution and By-Laws of that body, for a period of two years, no two residing in the same grand division of the State, except when more than three delegates are authorized. The Association shall pay the expenses of each Delegate representing the Association at the American Medical Association meetings.

SEC. 6. It shall, upon application, provide and issue charters to component Societies organized to conform to the spirit of this Constitution and By-Laws of the Association, or in the ethics of the American Medical Association, when so recommended by the Councilors.

SEC. 7. In sparsely-settled sections it shall have authority to organize the physicians of two or more counties into one component Society, the name to be chosen by that Society, so as to distinguish them from district and other classes of Societies; and these Societies, when organized and chartered, shall be entitled to all the privileges and representations provided herein for component Societies.

SEC. 8. It shall have authority to appoint special committees for special purposes from its own membership, or from among members of the Association who are not members of the House of Delegates; and such committeemen shall report to the House of Delegates in person, and may participate in the debate thereon.

CHAPTER V

Election of Officers

SECTION 1. All elections shall be by ballot of the House of Delegates and the majority of the votes cast shall be necessary to elect.

SEC. 2. On or before March 1st each year, preceding the annual session, the Board of Trustees

shall consider the names of those members from county medical societies certified to the Tennessee State Medical Association, as delegates to the House of Delegates. The Board will select nine delegates from those certified to compose a Nominating Committee. The nominees should represent the three grand divisions of the state, with three members being from East Tennessee, three members from Middle Tennessee and three members from West Tennessee. No two members of the Nominating Committee shall represent the same county medical society. Upon confirmation of the Nominating Committee by the Board of Trustees, the Executive Director of the Association shall notify the secretaries of all component medical societies of the names of members of the Nominating Committee, with the request that those members named to the Nominating Committee shall be made known to the membership of each of the component societies.

The Nominating Committee will be supplied by the Board of Trustees with the offices that are to be filled and elected by the House of Delegates. Any county medical society desiring to place the name of any physician for an office of the Tennessee State Medical Association, will have the opportunity to contact his representatives on the Nominating Committee from the grand division of the state in which he resides.

The Nominating Committee shall elect its chairman. It shall be the duty of the Nominating Committee to consult with other members in selecting candidates for the offices and to hold one or more meetings prior to the opening session of the House of Delegates, at which the best interest of the Association and of the profession of the state for the ensuing year shall be carefully considered. The committee shall report the results of these deliberations to the House of Delegates in the form of a ticket containing the names of the nominees for the offices to be filled. The Nominating Committee shall name at least one member for each of the offices to be filled at the general session.

SEC. 3. The Councilors shall be elected on the afternoon of the first day of the Session after their report is made to the House of Delegates, so that they may organize and plan the year's work. The nominations of Councilors may be made by the Nominating Committee.

SEC. 4. The report of the Nominating Committee and the election of officers, except the Councilors, shall be the first order of business of the House of Delegates, after reading of the minutes on the morning of the second day of the General Meeting of the Association.

SEC. 5. Nothing in this Chapter shall be construed to prevent additional nominations being made by members of the House of Delegates.

SEC. 6. In balloting for the nominees for President-Elect, if on the first ballot no one receives a majority of the votes cast, the name receiving the smallest number of votes shall be dropped, and the balloting shall proceed in this manner until an election is had.

CHAPTER VI

Duties of Officers

SECTION 1. The President, or his appointees, shall preside at all meetings of the Association. He shall appoint all members of Committees not otherwise provided for, shall deliver an Annual Address at such time as may be arranged, shall give a deciding vote in case of a tie, and shall perform such other duties as custom and parliamentary usage may require. He shall be the head of the profession of the State during his term of office, and, as far as practicable, shall visit, by invitation, the various Sections of the State and assist the Councilors in building up the Component Societies and in making their work more practical and useful. The retiring President shall be ex-officio a member of the Board of Trustees for one year.

SEC. 2. The Vice-Presidents shall assist the President in the discharge of his duties, as requested by the President. In the event of his death, resignation, inability to serve, or removal from office, the Vice-President to succeed him shall be from the same Grand Division of the State.

SEC. 3. The Treasurer shall give bond for the trust reposed in him, for such amount as the remaining members of the Board of Trustees may name, said bond to be made by a regular bonding company, and paid for by the Association. He shall demand and receive all funds due the Association, together with bequests and donations. All funds shall be deposited in a National Bank. He shall pay money out of the treasury on bills certified to by the Secretary or Executive Director of the Association only; he shall subject his accounts to such examination as the House of Delegates may order; he shall annually render an account of his acts and of the state of the funds in his hands.

SEC. 4. The Secretary-Editor of this Association, as Chairman, acting with the Committee on Scientific Work, shall prepare and issue the programs for and attend the meetings of the Association, and shall keep the minutes, or cause them to be kept, of the proceedings. He shall be Editor-in-Chief of the Journal of the Association and shall discharge such other duties as the Trustees shall specifically direct. His honorarium shall be determined by the Board of Trustees.

SEC. 5. The Board of Trustees shall be empowered to select and remove, without assigning cause, an Executive Director. The Executive Director may or may not be a member of this Association, and may or may not be a graduate in medicine. He shall be custodian of all records, books, papers, building and property belonging to the Association, except such property belonging to the Secretary-Editor, the Council, the Sections and the various committees, and shall keep account of and promptly turn over to the Treasurer all funds of the Association which may come into his hands; he shall provide for the registration of members and delegates at the Annual Meeting;

and upon request, shall transmit a copy of this list to the American Medical Association. Insofar as in his power, he shall use the printed matter, correspondence, and influence of his office to aid the Councilors in the organization of the component Societies and in the extension of the power and influence of this Association. He shall visit each councilor district at least once a year and oftener, if advisable, and assist the Councilors in organizing unorganized counties, and use every means possible to promote the interests of the Association. Should the Executive Director and Councilors deem it wise to organize two or more counties into one society, they shall have the right to take such action and such societies shall be recognized by the State Association. He shall conduct the official correspondence, notifying members of meetings, officers of their election, and committees of their appointment and duties. He shall discharge such other duties as the Board of Trustees shall direct. He shall act as business manager of the Journal of the Association, and he shall be the director of all activities in the central office. His salary shall be determined by the Board of Trustees. He shall be required to furnish bond paid for by the Association in the amount designated by the Board of Trustees.

SEC. 6. The Speaker of the House of Delegates shall preside over that body and perform the usual duties of such officer. He shall sign the Minutes of its transactions when same have been read and approved by the House. In the event of his absence for any cause, or upon request of the Speaker, the Vice Speaker of the House of Delegates, shall perform those duties. The Speaker shall also be ex-officio member of the Board of Trustees.

SEC. 7. In the absence of the Secretary, the House of Delegates may elect a Temporary Secretary.

SEC. 8. In the event of the death, resignation, disability, or removal of any official of this Association, other than the President, or a member of the Board of Trustees, the vacancy so created shall be filled by the Board of Trustees, and the officer so appointed shall serve until the next regular session of the House of Delegates.

This shall include Delegates and Alternate Delegates to the House of Delegates of the American Medical Association.

CHAPTER VII

Council

SECTION 1. The Council shall hold meetings during the Annual Meeting of the Association, and at such other times as necessity may require, subject to the call of the Chairman or on petition of three Councilors. It shall meet after the election of Councilors on the second day of the Annual Session for organization, and for the outlining of work for the ensuing year. At this meeting it shall keep a permanent record of its proceedings. Five Councilors shall constitute a quorum.

SEC. 2. Each Councilor shall be the representative of the Tennessee State Medical Association

in his District in matters pertaining to the conduct of members and of component societies. He shall make investigations and suggest solutions of problems which come to his attention. He shall make annually a written report of his activities to the Council.

SEC. 3. The Council may recommend to the House of Delegates censure, suspension, or expulsion of any member; or recommend to the House of Delegates censure or revocation of the Charter of any component society after a hearing before such persons and in such manner as the Council shall direct at which the accused member or component society, with or without counsel, shall be given an opportunity for a full and equitable hearing; or may suspend or drop from membership any member for the non-payment of dues. Any member shall be dropped from membership automatically upon the filing by any person with the Council of a certified copy of the final order of revocation of license of such member by any tribunal of competent jurisdiction. Any member suspended, expelled, or dropped from the membership may be reinstated by the affirmative vote of the majority of the House of Delegates upon recommendation of the Council. It shall make such report or recommendation to the House of Delegates as it deems to be the best interest of the Association.

CHAPTER VIII

Committees and Their Duties

SECTION 1. (a) The Committees of this Association shall be Standing and Special Committees. The Standing Committees shall be as follows:

1. A Committee on Scientific Work.
2. A Committee on Public Policy and Legislation.
3. A Liaison Committee to the Public Health Department.
4. A Committee on Memoirs.
5. An Insurance Committee.
6. A Committee on Post-Graduate Medical Education.
7. A Committee on Cancer.
8. A Committee on Hospitals.
9. A Grievance Committee.
10. An Advisory Committee to the State Department of Public Welfare.
11. A Public Service Committee.
12. A Rural Health Committee.
13. A Committee on Prepaid Health Insurance.
14. A Committee on Tennessee Medical Foundation.

(b) The members of these standing committees shall be appointed by the Board of Trustees. The terms of service of members of standing committees shall be for a period of one to three years except when otherwise provided in the By-Laws.

The appointments shall be made for such a period of years that the terms of not more than one-third of the members will terminate each year. Each standing committee shall make a report to the House of Delegates at each Annual Session.

(c) Special Committees may be appointed from time to time by the President or the Board of Trustees to carry on special activities.

SEC. 2. The Committee on Scientific Work shall consist of ten members, nine of whom are appointed. The Secretary-Editor shall be a member, and Chairman of the Committee. It is the duty of this Committee to plan and provide the scientific program for each meeting of this Association. Previous to each Annual Meeting it shall prepare and issue a scientific program which shall be adhered to by the Association as nearly as practicable. It shall also be the duty of this Committee actively to assist the Secretary-Editor and those acting as the Editorial Board in preparing the scientific portion of the Journal of the Association.

SEC. 3. The Committee on Public Policy and Legislation shall consist of nine members, one from each congressional district of the state. The committee shall be appointed by the Board of Trustees and the Board will appoint the chairman of the committee. The Secretary-Editor will be ex-officio, a member of the committee. The committee shall be organized with three members to be named for three years, three for two years and three for one year. Thereafter, members of the committee shall be named for a term of three years each. In the work of the committee, if it is found that additional members are necessary in the conduct of the committee's business, the committee may request the Board of Trustees for additional appointments to serve one year terms. Under the direction of the House of Delegates, it shall represent the Association in securing and enforcing legislation in the interest of the public health and of scientific medicine. It shall keep in touch with professional and public opinion, shall endeavor to shape legislation so as to secure the best results for the whole people, and shall utilize every organized influence of the profession to promote the general influence in local, state, and national affairs and elections. Its work shall be done with the dignity becoming a great profession, and with that wisdom which shall make effective its power and influence. It shall have authority to be heard before the entire Association upon questions of great concern at such times as may be arranged during the Annual Meeting.

SEC. 4. The Liaison Committee to the State Public Health Department shall consist of five members, to be appointed by the Board of Trustees of the Association and who shall name the Chairman of the Committee for the period of the appointee's term of office. At least one member shall be from each grand division of the State. One member shall be appointed for a period of five years; one for four years; one for three years; one for two years; and one for one year. Thereafter, one member shall be appointed annually for a period of five years.

It shall be the duty of this Committee to confer with the officials of the Department of Health of the State in matters of policy affecting the profession of the State; and it shall be the further

duty of this Committee to confer with any member or members of this Association in matters concerning the activities of the Department of Health of the State. Provided, that all matters over which this Committee shall have jurisdiction shall be presented to the Committee, through its Chairman, in writing.

It shall be the duty of the Committee to make a detailed annual report to the House of Delegates of its activities; said report being subject to review by the House of Delegates. In the interval between the annual sessions of the House of Delegates the action of this Committee by a majority vote shall be final.

In the event of a vacancy in the membership of the Committee for any cause, said vacancy shall be filled by appointment by the Board of Trustees, said appointee assuming the position on the Committee for the unexpired term of the member whom he succeeds. The House of Delegates directs the Liaison Committee to act in an advisory manner to the Public Health Council as now constituted, in the matter of formation of all policies.

SEC. 5. The Committee on Memoirs shall perform such duties as will contribute to the proper recognition of deceased members.

SEC. 6. The Committee on Insurance shall consist of three members, one from East, one from Middle, and one from West Tennessee, to be appointed by the Board of Trustees of the Association. One member shall be appointed for one year, one for two years, and one for three years. Thereafter one member shall be appointed annually for a term of three years. Any vacancy shall be filled for any unexpired term that might occur by the Board of Trustees at any Annual Session.

It shall be the duty of this Committee to attend to all group insurance in which this Association is or may become interested. It shall have power to select insuring companies, accept or reject master policies, arrange premium rates, and act as trustees for this Association in the matter of such group insurance.

All actions of the Committee shall be subject to the approval of the Board of Trustees.

The Chairman of the Committee shall be designated by the Board of Trustees. He shall report to the House of Delegates at each Annual Session upon the activities of the Committee during the preceding year. All necessary expenses of the Committee in the performance of its duties shall be paid by the Treasurer of this Association upon certification of the expenses by the Chairman of the Committee, but this shall not apply to attendance at meetings held at the Annual Meeting.

SEC. 7. The Committee on Postgraduate Medical Education shall have for its duties the promotion of postgraduate medical activities among members of this Association.

The members of the Committee shall be appointed by the Board of Trustees and shall have representation from each Councilor District, from

each of the major specialties, and from each participating medical school.

The Chairman shall be appointed by the Board of Trustees.

SEC. 8. The Committee on Cancer shall promote educational activities directed at two objectives: (a) the fullest possible knowledge on the part of the medical profession concerning the recognition of malignancy in its early stages, and (b) the disposition on the part of lay people to consult a well-qualified physician when a condition presents which may be an early malignancy.

SEC. 9. The Committee on Hospitals shall consider all matters relating to the operations of hospitals as the same may affect the medical profession and the public welfare. It shall make recommendations to the House of Delegates when in its judgment action should be taken on any matter pertaining to the policies enforced in the operation of a hospital.

The principal objective of this Committee is that of preserving a proper relationship between the medical profession and the hospitals in the State. When policies are formulated and enforced by a hospital, which in the opinion of the Committee constitute a violation of the ethical principle which should govern the relationship of a hospital to members of the medical profession and the public, it shall be its duty to bring the matter to the attention of the medical profession and to take such other steps as are deemed necessary and appropriate to correct the practice.

The Committee is charged with the duty of recommending legislation on the subject to the House of Delegates should such a step be considered advisable.

SEC. 10. The Grievance Committee's duties shall be to act as a body to hear any complaints that are registered by patients against any physician at whose hands he thinks he has suffered an injustice. This Committee shall consist of three members—one from each Grand Division of the State. The Committee will be composed of the last three surviving Ex-Presidents. The Ex-president which has served on the Committee for the two previous years will serve as Chairman during the third year of his term on the Committee.

SEC. 11. The Advisory Committee to the State Department of Public Welfare shall consist of five members to be appointed by the Board of Trustees for a term of five years, provided, that the first appointments shall be for the following terms: one member for one year; one member for two years; one member for three years; one member for four years; and one member for five years—all subsequent appointments to be for a term of five years.

The Committee shall (1) assist the Department of Public Welfare formulate policies which concern the relationship of the Department to the medical profession; (2) assist in determining disability for public assistance programs of the Department and other medical problems related to public assistance; and (3) advise the commissioner

on the medical aspects of other departmental projects or problems.

The Committee, through its Chairman, shall make an annual report of its activities to the House of Delegates.

Sec. 12. The Public Service Committee—This Committee shall be appointed by the Board of Trustees and shall consist of one representative from each Councilor District and six members from the state-at-large, two members being appointed from each grand division.

It shall be the duty of the Public Service Committee to enlighten and direct public opinion in regard to the problems of health and medical care, and the promotion of understanding between the public and the medical profession.

This Committee shall have a full-time Secretary who will be the Public Service Director and who shall be a member of the Central Office staff. He shall be responsible for the conduct of the activities of the Committee throughout the State and he will assist with the other field services of the Association.

The Public Service Director shall be employed or removed without assignment of cause by the Board of Trustees upon recommendation of the Public Service Committee. His salary shall be determined by the Board of Trustees.

The Public Service Committee shall submit to the Board of Trustees annually a proposed budget.

Sec. 13. Rural Health Committee—The Rural Health Committee shall be appointed by the Board of Trustees. The Chairman shall be appointed by the Board of Trustees.

The duties of the Rural Health Committee shall be to promote the improvement of health standards in rural areas of Tennessee.

Sec. 14. The Prepaid Health Insurance Committee—This Committee shall be composed of such members, lay and medical, as deemed necessary by the Board of Trustees. A chairman shall be designated by the Board of Trustees.

The duties of the Prepaid Health Insurance Committee shall be the perpetual study and investigation of the problems of prepaid health insurance.

Sec. 15. The Committee on Tennessee Medical Foundation shall consist of nine members to be appointed by the Board of Trustees, the members to serve terms of three years each, with three members to be appointed each year; that the first appointments shall be made for the following terms: three members for three years; three members for two years and three members for one year, with all subsequent appointments to be for terms of three years.

The Committee shall formulate the policies and determine the program of the Tennessee Medical Foundation. It shall have the general management and control of the activities of the Foundation. The Committee, through its chairman, shall make an annual report to the House of Delegates.

At all meetings of the Committee, five members shall constitute a quorum for the transaction of business.

The Chairman of the Committee shall be appointed by the Board of Trustees.

The duties of the Committee shall be to study the problems involved with medical care in rural and isolated areas and to assist in providing medical care to such areas.

The Committee on Tennessee Medical Foundation may establish such subordinate committees as necessary to conduct the business of the Foundation. The Committee on Tennessee Medical Foundation shall also constitute the members of the Board of Directors of the Tennessee Medical Foundation.

CHAPTER IX

Assessments and Expenditures

SECTION 1. The annual dues shall be determined by the House of Delegates and shall be levied per capita on the active members of the chartered component societies. The annual dues shall be payable on January 1 of the year for which they are levied, but any component society reporting dues to the Tennessee State Medical Association shall be considered delinquent if payment of dues are not made by July 1 of the year for which they are levied. The secretary of each component society shall cause to be collected and shall forward to the offices of the State Association, the dues for its members. Any member whose name has not been reported for enrollment and whose dues for the current year have not been remitted to the secretary of the State Association on or before July 1 of the year for which they are levied shall stand delinquent until his name is properly reported and his dues for the current year properly remitted. Every active member of the Association shall receive the Journal without cost.

Sec. 2. *A new member joining the Association for the first time and who is so reported after July 1 of a given year, shall pay one half of the annual dues for that year only.*

Sec. 3. The Honorary Members of any component medical society are exempt from payment of dues, but a complete list of their names, certified by the respective component medical society, will be kept in the Headquarters Office of the Tennessee State Medical Association. Likewise, a component medical society is required to report a list of its Veteran Members who have been elected by that society and the Journal will be furnished to Veteran Members without cost.

Sec. 4. The secretary or treasurer of each component society shall forward a roster of all officers, membership, a list of delegates to the House of Delegates of the Tennessee State Medical Association, together with a list of non-affiliated physicians of the county if practical, and also a list of members who have died during the year, to the Executive Director of this Association thirty days in advance of the annual meeting.

Sec. 5. The record of payment of dues on file in the offices of the Tennessee State Medical Association shall be final as to the fact of payment by a member of the Association.

CHAPTER X

Rules of Conduct

The Principles set forth in the Code of Ethics of the American Medical Association shall govern the conduct of members in their relations to each other and to the public.

CHAPTER XI

The deliberations of this Association shall be governed by parliamentary usage as contained in Robert's "Rules of Order."

CHAPTER XII

Component Societies

SECTION 1. All Component Societies now in affiliation with the State Association, or those that may hereafter be organized in this State, which have adopted principles of organization not in conflict with this Constitution and By-Laws, may, upon application to the House of Delegates, receive a charter from and become a component part of this Association.

SEC. 2. Charters shall be issued only upon approval of the House of Delegates, and shall be signed by the President and Secretary of this Association. The House of Delegates shall have authority to revoke the charter of any component Society, whose actions are in conflict with the letter or spirit of this Constitution and By-Laws, or the code of ethics of the American Medical Association upon recommendation of the Council.

SEC. 3. Each component Society shall judge of the qualifications of its own members; but as such Societies are the only portals to this Association, and to the American Medical Association. Every reputable and legally registered physician, who is practicing or who will agree to practice nonsectarian medicine, shall be entitled to membership. Each component Society of this Association may amend its constitution and/or by-laws to provide that the payment of dues to the American Medical Association shall be a condition of active membership in that society. Before a charter is issued to any component Society, full and ample notice and opportunity shall be given to every such physician in the County to become a member.

SEC. 4. Only one component Medical Society shall be chartered in any County. When more than one County Society exists, friendly overtures and concessions shall be made, with the aid of the Councilor for the District, if necessary, and all of the members brought into one organization. In case of failure to unite, an appeal may be made to the Council, which shall decide what action shall be taken.

SEC. 5. Any physician who may feel aggrieved by the action of the Society in his County in refusing him membership, or in suspending or expelling him, shall have the right to appeal to the Council.

SEC. 6. In hearing appeals, the Council may admit oral or written evidence, as in its judgment will best and more fairly present the facts, but

in the case of every appeal, both as a board and as individual Councilors in district and county work, efforts at conciliation and compromise should precede all such hearings.

SEC. 7. When a Member in good standing in a component Society moves to another County in the State, his name, upon request, and with the consent of his component Society, shall be transferred, without cost, to the roster of the component Society in whose jurisdiction he moves, but he shall not hold membership in more than one component Society.

SEC. 8. A physician living on or near a County line may hold his membership in that County most convenient for him to attend, on permission of the Society in whose jurisdiction he resides, and with consent of his Councilor.

SEC. 9. Each component Society shall have general direction of the affairs of the profession in the County or Counties and its influence shall be constantly exerted for bettering the scientific, moral, and material condition of every physician in the County; and systematic effort shall be made by each member, and by the Society, as a whole, to increase the membership until it embraces every qualified physician in the County.

SEC. 10. Frequent meetings shall be encouraged and the most attractive programs arranged that are possible. The younger members shall be especially encouraged to do postgraduate and original research work and to give the Society the benefits of such labors. Official position and other preferments should be unstintingly given to such members.

SEC. 11. At some meetings in advance of the Annual Meeting of this Association, each component Society shall elect a Delegate or Delegates to represent it in the House of Delegates of this Association, in the proportion of one Delegate and one alternate to each fifty members or fraction thereof; and the Secretary of the Society shall send a list of such Delegates to the Secretary of this Association at last ten days before the Annual Meeting.

SEC. 12. The Secretary of each component Society shall keep a roster of its members and shall furnish an official report of the membership to the Secretary of this Association at least once each year and oftener if circumstances as to membership may require. The Secretary shall note any changes in the personnel of the membership, with special reference to changes due to death and removal from the district.

CHAPTER XIII

Amendments

In order to amend the by-laws of this Association, a two-thirds majority of the members of the House of Delegates present and voting shall be necessary. Such amendment, after having been filed in writing, shall lie over one day. Any by-law may be suspended during the pending meeting by unanimous consent.

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The author discusses the use of current methods of testing pulmonary function for purposes of determining reversible disease, response to therapy, appraisal of preoperative status and to aid in the education of the patient.

Value And Applications Of Pulmonary Function Testing In Pulmonary Tuberculosis And In Chronic Bronchopulmonary Disease

GLENN E. HORTON, M.D., and JAMES W. PATE, M.D.,† Memphis, Tenn.

Introduction

Testing of pulmonary function is all too often neglected by the practitioner because of the failure to understand its value and, often, its simplicity. Thus, these tests too often are left to the cardiopulmonary physiologist.

In addition to its usual indications, testing of pulmonary function can prove most informative in the management and following the progress of both the ill and inactive or arrested tuberculous patient. This is especially true since a good proportion of the deaths in this era of chemotherapy result from pulmonary insufficiency and cor pulmonale resulting from progressive pulmonary changes. The clinical applications of the testing of pulmonary function in both the active and inactive tuberculous patient is presented with application to chronic bronchopulmonary disease.

Procedure

The objective measurements (parameters) selected for study of the patients to be discussed in this paper were obtained upon the 9 and 13.5 liter Spirometers,* the Vitalor** (bellows) vital capacity apparatus, and by bronchospirometry.*

†From the Departments of Medicine and Surgery, University of Tennessee College of Medicine and the City of Memphis Hospitals, Memphis, Tenn.

*Warren E. Collins Company, Boston, Mass.

**McKesson Appliance Company, Toledo, Ohio.

Results and Discussion

The application of testing of pulmonary function in the tuberculous patient may be divided into four main categories: (1) detection of reversible deficits, as in bronchospastic disorders or endobronchial disease; (2) evaluation of response to various modalities of therapy; (3) appraisal of preoperative status; and (4) in the education of the patient.

I. Detection of Reversible Deficits of Pulmonary Function

Testing of pulmonary function is most useful in the detection of pulmonary insufficiency in the tuberculous patient who will be benefited by the various modalities of medical therapy. Frequently old tuberculous patients have emphysema and bronchospasm in addition to the fibrosis of inactive tuberculosis. These patients may respond to bronchodilators, expectorants, steroids, mechanical breathing devices which assist respiration, and training in the maintenance of an effective bronchopulmonary toilet.

Testing of pulmonary function can give additional information not always demonstrated on physical examination, by fluoroscopy, or roentgenograms of the chest. Methods of testing ventilatory function have been well established. The minimal evaluation includes both a total vital capacity and a timed expiratory (vital) capacity.

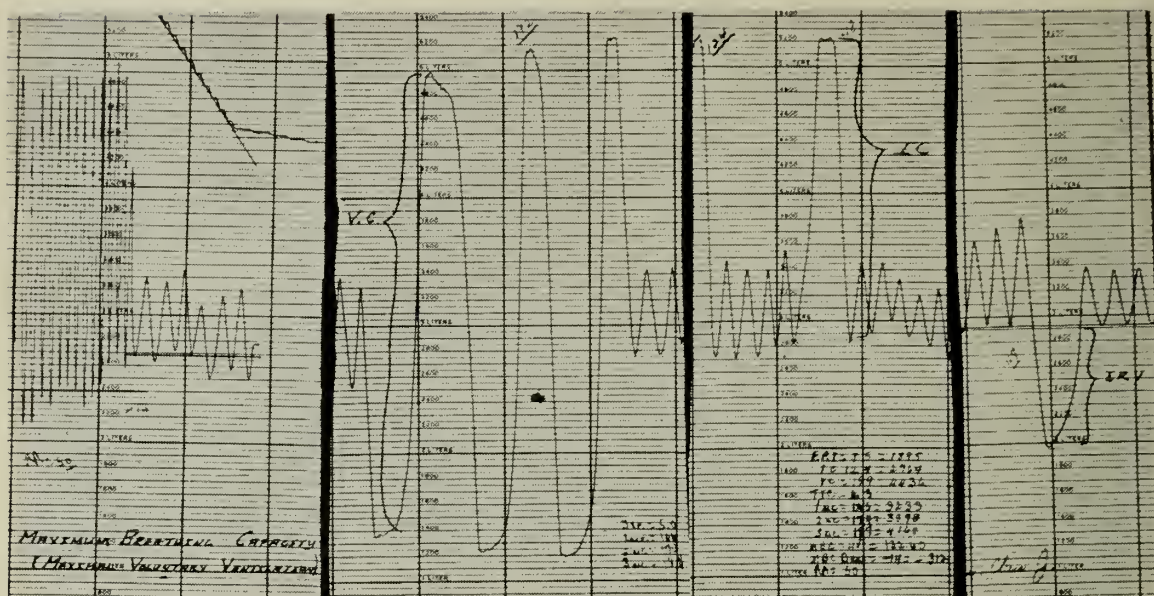


FIG. 1 (A).

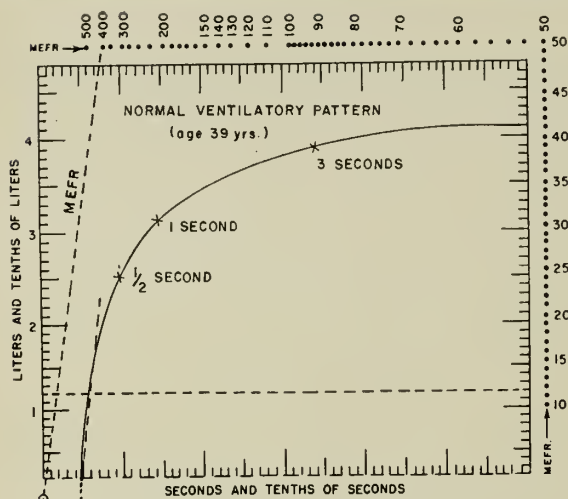


FIG. 1 (B).

FIG. 1. Normal pulmonary ventilation function parameters as obtained on the (A) Conventional spirometer (Respirometer); (B) Bellows vital capacity apparatus (The Vitalor**).

Normal spirographic and ventilographic findings, as obtained by the conventional spirometer, have been well documented by Cournand and Richards,¹ Comroe,² Meeneely,³ Motley,⁴ and Horton and Drerup.⁵ These normal parameters are illustrated in figure 1A which demonstrates a normally performed maximum breathing capacity and total and timed expiratory vital capacities. Much of the same information is obtained by use of the Vitalor as originally described by Horton and Phillips,⁶ and is illustrated in figure 1B indicating the normal total and timed expiratory vital capacities and maximum expiratory flow rate. The latter parameters can be obtained simply and rapidly in the office or at the bedside, if necessary.

The parameters are observed when pul-

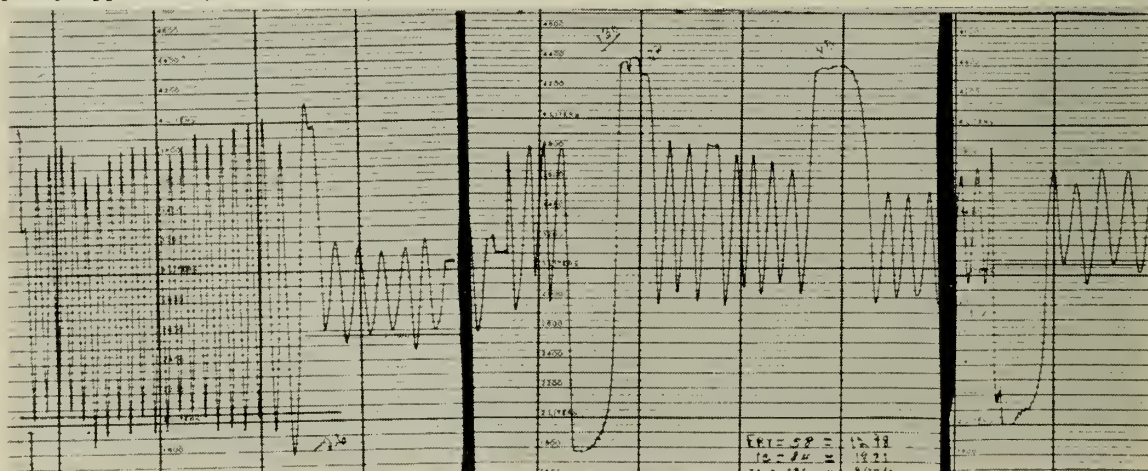


FIG. 2 (A).

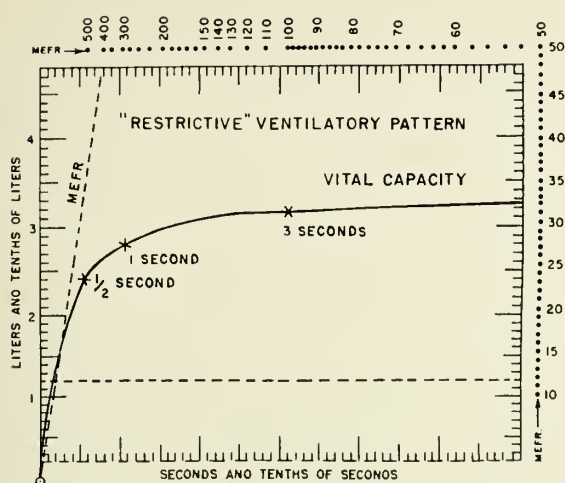


FIG. 2 (B).

FIG. 2. "Restrictive" ventilatory pattern in case of pulmonary fibrosis associated with pulmonary sarcoidosis, as determined on the (A) Conventional spirometer; (B) Bellows vital capacity apparatus.

monary (volume) is "*restricted*" due to decreased lung volume or decreased expansibility of the lung caused by intrinsic or extrinsic mechanism. The former may be secondary to pulmonary fibrosis and the latter due to pleural effusion, fibrothorax, pneumothorax, thoracoplasty, and plombage. The basic ventilographic change consists of a loss of the total vital capacity. The maximum expiratory flow rate may be well preserved also, as determined either on the conventional spirometer or the Vitalor. Figures 2A and 2B present these changes.

The "obstructive" ventilatory pattern (Figs. 3A and 3B) demonstrates a marked diminution of the timed expiratory capacity and the maximal rate of flow as seen in increased resistance to air flow as seen in endobronchial disease or stenosis, emphysema, and bronchospasm. The latter is usu-

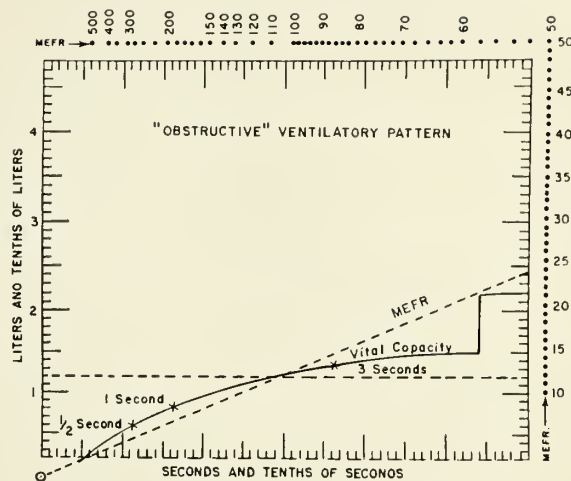


FIG. 3 (B).

FIG. 3. "Obstructive" ventilatory pattern in case of obstructive pulmonary emphysema as obtained on the (A) conventional spirometer; (B) Bellows vital capacity apparatus (the vertical lines represent volume only—explanation has been previously described⁶).

ally reversible after the administration of bronchodilator therapy.

II. Evaluation of Response to Therapy

Testing of pulmonary function is valuable in determining the response to various forms of therapy. Active tuberculosis may impair ventilation. The permanence of this may be indicated by serial testing of pulmonary function, since a return toward normal may result from therapy of this infectious disease. Even when the disease is inactive, residual complicating emphysema and fibrosis, in addition to the chronic bronchitis syndrome, may pose problems in the management of the patient. In such cases the response to bronchodilator drugs may indicate the severity of the bronchospastic element and the implications of therapy. Figure 4 indicates the response to the con-

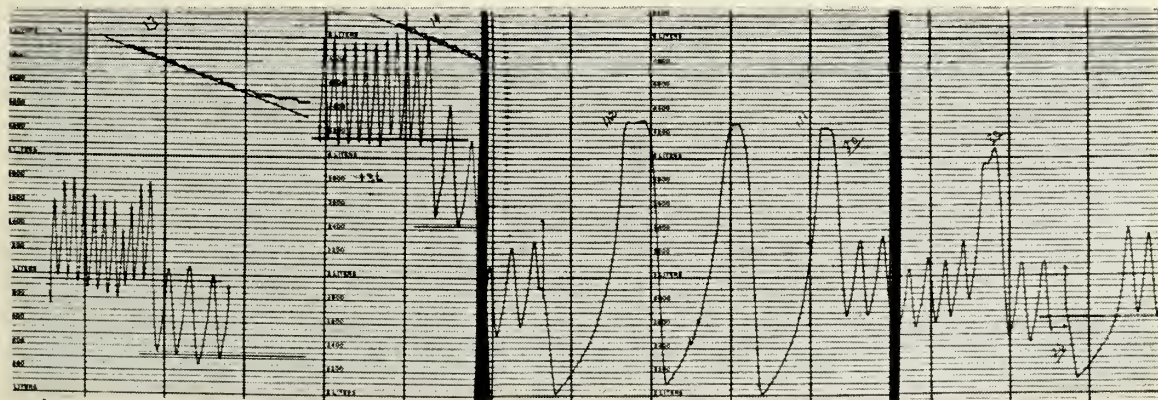


FIG. 3 (A).

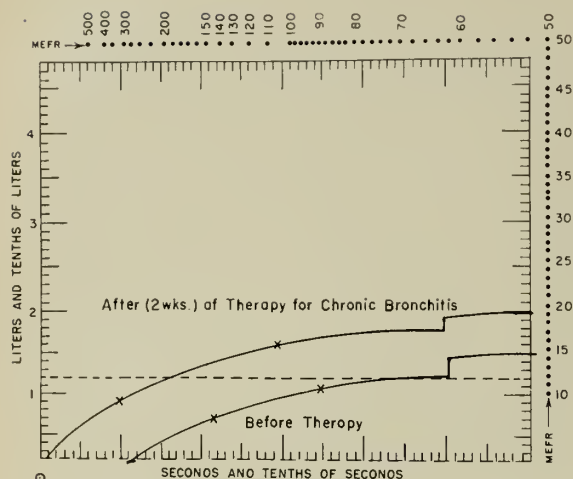


FIG. 4. Ventilatory response to the conventional methods of therapy for the chronic bronchitis syndrome.

ventional methods of the chronic bronchitis syndrome. In figure 5, the temporary fa-

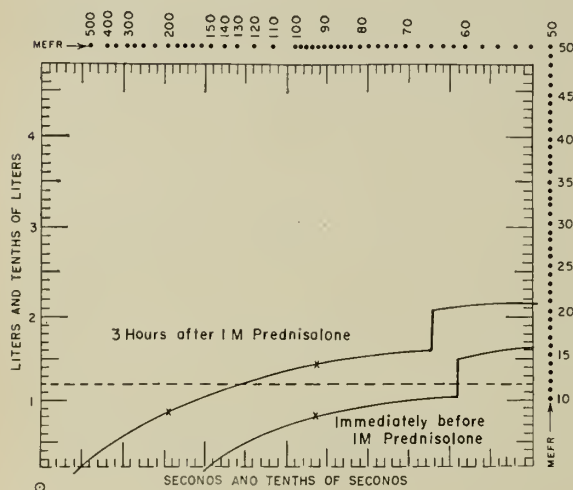


FIG. 5. Ventilatory response to an injection of prednisolone in a patient with inactive pulmonary tuberculosis complicated by the chronic bronchitis syndrome with bronchospasm.

vorable response of the *expiratory ventilogram*⁶ of a tuberculous patient to intramuscular prednisolone given for a subdeltoid bursitis is seen. It was concluded that in advent of severe respiratory failure in this patient, steroids may be life saving. This was later borne out in the subsequent clinical course of this patient. Figure 6 presents the ventilatory response of a patient with severe cor pulmonale resulting in anasarca resistant to diuretics, correction of electrolyte imbalance digitalis, low salt diet, and daily intravenous aminophyllin. The addition of steroid therapy resulted in a dra-

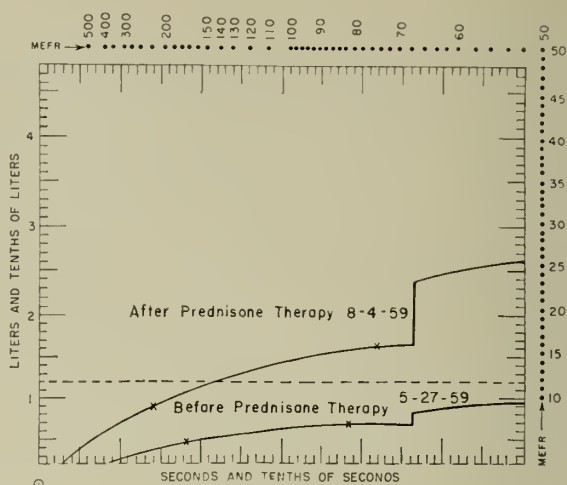


FIG. 6. Ventilatory response of a patient with cor pulmonale and therapeutically resistant anasarca, treated with the addition of adrenocortical steroids (prednisolone).

matic ventilatory and clinical response. The response on the *expiratory ventilogram* of another tuberculous patient to digitalization before and after nebulized bronchodilator therapy is illustrated in figure 7.

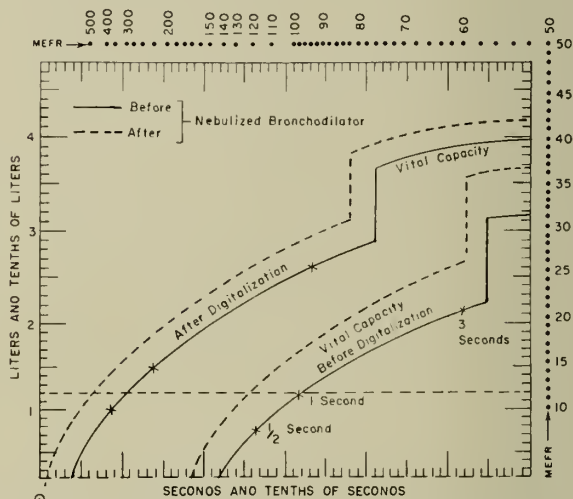


FIG. 7. Ventilographic response of a tuberculous patient with cor pulmonale and obstructive emphysema to digitalization before and after nebulized bronchodilator therapy.

III. Estimation of Preoperative Status

Pulmonary function tests are valuable in the preoperative study of tuberculous patients being prepared for chest surgery. These studies are aimed at alerting the clinician to prevent postoperative complications. Comroe² states that no definite criteria have as yet been developed for the preoperative evaluation of the candidate for lobectomy or pneumonectomy, and it is

likely that such criteria will only result from a cooperative study requiring a period of years.

Studies of pulmonary function were obtained on 200 tuberculous patients undergoing chest surgery, and in no instance did the function tests exceed the clinical appraisal of the patients' tolerance to operation.⁷

In some instances the true exercise tolerance, which is a major factor in the actual preoperative evaluation of a patient, may not be reflected on the usual pulmonary ventilation tests. The ability of the patient to walk, climb stairs, etc. may be of more significance than the values of the ventilatory functions.

A patient requires a vital capacity of at least 1 to 1.5 liters to produce an effective cough in the postoperative period. Thus, the preoperative vital capacity would be of prognostic value in this regard.

Cardiopulmonary insufficiency is more apt to develop in the patient with obstructive emphysema who has hypercapnia and hypoxia. The latter can produce or accentuate hypertension in the pulmonary vascular bed, thus putting an additional load on the right ventricle which may result in right heart failure. Nitrous oxide anesthesia is avoided in this type of patient, and cyclopropane with 80% oxygen is preferred. With cyclopropane anesthesia oxygenation is usually normal, but hypercapnia may develop unless the anesthetist avoids alveolar hypoventilation by adequately assisting the air exchange. Medications that depress the respiratory center, such as barbiturates and morphine, are to be avoided.

The resection of lung tissue may decrease the vital capacity and the maximum breathing capacity (or the maximum voluntary ventilation), but the changes in these parameters fail to correlate with the extent of the resection. Pneumonectomy for a destroyed lung in a tuberculous patient who has previously had a thoracoplasty usually has no significant effect upon pulmonary function. However, late thoracoplasty after pneumonectomy usually further decreases the vital capacity and the maximum breathing capacity. Resection of an atelectatic lobe usually has no effect on pulmonary function, but thoracoplasty over a diseased

area may produce more atelectasis by compression of the previously expanded lung, decreasing pulmonary function.

The determination of the vital capacity parameters prior to operation may suggest the need for a tracheotomy before or during the surgical procedure. An adequate vital capacity must be maintained to ensure an adequate cough. Tracheotomy may also be indicated for the aspiration of bronchial secretions, to decrease dead space, and to facilitate a more effective bronchopulmonary toilet.

IV. Education of the Patient

Recorded serial studies of pulmonary function are of great value in the education of the tuberculous patient. An illustration may be worth a thousand words.

Psychologically, objective evidence of improving pulmonary function can offer great encouragement to the patient. It can also illustrate the effectiveness of various drugs or treatment programs as seen in figures 5 and 6, following steroid therapy, or the response to digitalization before and after nebulized bronchodilator therapy, as in figure 7.

The investigation of new drugs used in the therapy of the chronic bronchitis syndrome can be more adequately evaluated by those methods. In addition, the lack of a therapeutic response to a certain drug may be significant in the overall management of the tuberculous patient. Testing of pulmonary function may establish greater rapport between patient and physician. Finally, the harmful effects of smoking can be more forcefully pointed out to the patient. Such a demonstration, presenting objective personal evidence may be more acceptable to the patient than theoretical discussions with him.

Summary

The value and applications of pulmonary function testing in the active and inactive tuberculous patient with chronic bronchopulmonary disease has been presented and discussed.

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Suite C. Medical Center Bldg., 774 Adams, Memphis 5, Tenn.

Serial Studies of Renal Function in Pregnancy Complicated by Diabetes Mellitus: Sims, Ethan, A. H., M.D. *Diabetes*, May-June, 1961, 10, p. 190.

In normal midpregnancy renal plasma flow is increased approximately 50% and glomerular filtration rate about 30%. The juvenile diabetic is subject to three forms of kidney disease, namely, glomerulosclerosis, pyelonephritis and toxemia. The purpose of this study was to delineate the effect of pregnancy on renal function and 8 patients who had diabetes, 5 with clinical renal disease, were studied with insulin and para-amino hippurate clearance.

Essentially the same increase in filtration rate and plasma flow was found as has been found in normal pregnant patients. However, there was

a proportionally greater increase in plasma flow than in filtration rate, so that the filtration fraction was lower than in normal subjects. Reduced filtration rate characteristically occurred in the presence of pregnancy complicated by Kimmelstiehl-Wilson's disease.

In the presence of pyelonephritis and pregnancy, renal clearances were not as diagnostic and were found to be normal or even above normal.

The physiologic edema of pregnancy in these patients developed in the presence of a normal rate of glomerular filtration.

Finally, the tendency toward glucosuria was increased as a result of the physiological increase in filtration rate. (Abstracted for Tennessee Diabetic Association by Dr. Fred Goldner, Nashville.)

CASE REPORT

Postoperative Death Due to Pheochromocytoma.

Benjamin T. Po, M.D. and Lynch D. Bennett, M.D.,*
Nashville, Tenn.

Patients who have a history of hypertension and who are to undergo a major or minor surgical procedure should be carefully evaluated as to their hypertensive problem. A complete past history is essential, especially with respect to the hypertensive status. Fifty percent of the patients encountered with hypertension due to pheochromocytoma are not readily distinguishable from those with essential hypertension. Symptoms and signs of hypertension due to pheochromocytoma are the result of epinephrine and norepinephrine which these tumors produce.¹ The development of acute hypertension during anesthesia or during an operative procedure may rarely be due to the presence of an unsuspected pheochromocytoma. It is important that both surgical and anesthesia teams be aware of this, for adrenolytic drugs may be the only method available to control the dangerous and fatal hypertension.² Smithwick and coauthor³ reported that in their series of patients who were to be treated by extensive sympathectomy for hypertension, 0.5% had pheochromocytoma. According to Graham⁴ pheochromocytoma is responsible for the death of about 800 persons in this country annually. Some of these patients undergo surgery and their response to either anesthesia and/or surgery may be fatal. Apgar and Papper⁵ showed that the danger of performing unrelated surgical procedures on patients with pheochromocytoma is associated with mortality of about 50 percent. If one is aware of this condition and recognizes some of the potential dangerous responses during a surgical or anesthetic procedure, it may lead to the recognition of the unsuspected disease. Unfortunately, 70% of all instances of pheochromocytoma are diagnosed only at post-mortem.⁶

In this report a case is being used to stress the importance of a good past history, and

a careful evaluation of the hypertension even if the patient is to undergo a minor procedure.

Case Report

A. B. (326720) a 52 year old white woman was admitted on Nov. 27, 1960, for a diagnostic dilatation and curettage because of vaginal bleeding which started on Oct. 15, 1960. Bleeding lasted for 8 days, resembling what the patient described as a regular menstrual flow. The last menstrual period was approximately 2 years ago. No other symptoms were noted to be attributed to her gynecologic problem.

The only significant past history available was that she had been treated for episodes of high blood pressure on several occasions with anti-hypertensive drugs.

Further inquiries after the death of the patient revealed that she had been treated elsewhere for high blood pressure with a reading of 180/100 on April 23, 1958. She was treated with Rauwiloid and Veriloid. On May 23, 1958, her B.P. was 210/100. Subsequent follow-up twice weekly revealed pressure reading oscillating from 140/80 to 170/100. On her last visit on May 10, 1959, the B.P. was 150/80. Except for some urinary infection, she had no other symptoms. The patient was not seen by a doctor for the hypertensive disorder from May 1959 until onset of vaginal bleeding.

On admission to the hospital the B.P. was 180/100, P. 82 per minute, and R. 18 per minute, T. 98.6° F. Complete physical examination revealed no abnormal findings other than moderate cervicitis, with bleeding from the cervix of a normal sized uterus.

Laboratory examinations revealed urinalysis and complete blood counts to be within normal limits, except for a low urinary specific gravity of 1.002. On Nov. 27, 1960, the patient was given Nembutal (pentobarbital sodium) 0.1 Gm., Demerol (meperidine) 75 mg., atropine 0.0004 Gm. for premedication. On the following day, under Surital (thiamylal sodium) 200 mg., nitrous oxide 1.5%, cyclopropane 300 cc. per minute and oxygen 1.5% combination anesthesia, dilatation and curettage were performed. A very small amount of atrophic tissue was obtained. Biopsy of the cervix and endocervix were also done. The procedure lasted 15 minutes. During the procedure, the B.P. was maintained between 140/90 to 160/100, P. 85 per minute and R. 20 per minute. No untoward reactions were noted. The patient tolerated the procedure well and left the operating room in satisfactory condition.

Upon arrival to the recovery room, the patient had a B.P. of 200/140. This was soon followed by pallor and sweating. Re-evaluation of the patient's condition revealed a B.P. of 190/140. The patient rapidly developed signs and symptoms of pulmonary edema (dyspnea, tachycardia, and rales on both lung fields). She was digi-

*From the Surgical Service, Baptist Hospital, Nashville, Tenn.

talized with lanatoside C. She then developed hypotension, the blood pressure dropping to shock level. She was given vasopressor agents in the form of Vasoxyl (methoxamine Hcl.) and then Levophed (levarterenol) and Neosynephrine (phenylephrine). In spite of all efforts, the patient died 3 hours after the termination of the surgical procedure.

An autopsy was obtained and the patient was found to have: (1) a pheochromocytoma in the left suprarenal gland; (2) pulmonary edema and congestion; (3) cerebral edema; (4) parasagittal meningioma; and (5) passive visceral congestion.

Comments

It has been postulated that the prolonged high level of circulatory vasopressor products from the pheochromocytoma might cause a chronic decrease in the total blood volume. If this were true, the removal of the source of the vasopressor substances would result in the expansion of the vascular bed to normal, in turn resulting in shock unless the reduced blood volume was restored to normal. There have been published reports of the beneficial effect of whole blood transfusion at the time of the removal of the tumor, but these have been given apparently on an empirical basis.^{7,8} Death usually follows as the result of hypertensive crisis, which may lead to cerebral hemorrhage, pulmonary edema, ventricular fibrillation or acute ventricular failure. This is usually followed by secondary hypotension which may be severe and fatal. It is thought that hypotension is due to a cessation of secretion of norepinephrine and epinephrine by the tumor.⁹ Bartels and Cattell¹⁰ emphasize that these instances of hypertension constitute an extremely dangerous situation and that urgent treatment should be instituted.

Two instances of pheochromocytoma were reported by Taylor,² which were suspected and diagnosed after an unusual hypertensive crisis during induction of anesthesia and surgical procedure.

A number of signs and symptoms suggest the possibility of a pheochromocytoma or paragangliomas as a cause of hypertension. These include paroxysmal or nonparoxysmal hypertension, sweating, vasomotor phenomena, elevated body temperature, normal cold pressor response, postural hypotension and postural tachycardia. Laboratory examinations include a fasting blood sugar

level above 120 mgs. per 100 cc. or more, a basal metabolic rate of plus 20% or more, glycosuria and elevated catecholamine levels in the urine. Other diagnostic tests are intravenous pyelogram, insufflation of air retroperitoneally, glucose tolerance test, precipitation of attacks with the histamine and the Regitine (methanesulfonate) test. Radioactive Diodrast (iodopyracet) uptake, and a test of renal function, especially Howard's test, are of diagnostic aid in distinguishing hypertension of renal origin. Gitlow and associates,¹¹ described a simple colorimetric urine test for pheochromocytoma. The test involved in the semi-quantitative determination of VMA (3-methoxy, 4-hydroxymandelic acid), a metabolite of epinephrine and norepinephrine in the urine. The VMA is present in normal human urine but is abnormally elevated in the patients with pheochromocytoma. This test is used as a screening test and further studies should be made if a positive result is obtained. It helps differentiate normal subjects or patients with primary hypertension from those with pheochromocytoma.

Although there is no absolute test which is invariably diagnostic, careful study of the patient often reveal a number of highly suspicious findings, and with these, exploration will rarely show negative result.

Summary

Pheochromocytomas, although considered to be rare, can often be detected by careful appraisal of the history and the patient's physique. This tumor is peculiar to thin people, especially those with persistent hypertension.

A case has been presented in which a past history failed to reveal intermittent hypertension and the hypertension on admission was considered to be of an origin other than a pheochromocytoma.

A simple colorimetric test for pheochromocytoma has been described which can easily be performed in ordinary clinical laboratory.

During anesthesia or surgical procedure, a sudden rise of blood pressure without undue reasons should alert both the anesthesiologist and the surgeon to the possibility of an unsuspected pheochromocytoma; the

procedure should be terminated and the patient be thoroughly screened for this tumor.

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During 1960, almost one out of every five contacts between U. S. patients and physicians in private practice did *not* involve actual sickness or injury. Figures released by the National Disease and Therapeutic Index (N.D.T.I.), a continuing statistical survey of private medical practice, attributed 18% of all patient visits to special conditions without sickness. Prominent among these special conditions were prenatal care, inoculations and various examinations. In total they accounted

for more trips to the doctor than either of the two leading disease categories, respiratory and circulatory disorders. N.D.T.I. results point up a major role of the American physician in maintaining the good health of "well" patients. N.D.T.I. collected data from approximately 2700 doctors during 1960. The study estimated a grand total of 972 million individual diagnoses were made by physicians for private patients in the U. S. last year. (Release—April, 1961).

CASE REPORT

Histoplasmosis Resembling Tumor of the Lung

Marvin L. Wolff, M.D.,* Memphis, Tenn.

A 41 year old white man came to my office on January 20, 1959, with the complaint that he had been having a fever up to 101°F. each afternoon for the previous 3 weeks. Except for general malaise associated with the fever, he had no symptoms. The physical examination was normal, an electrocardiogram and urinalysis were normal, but his temperature was 100.5°F., his white blood count was elevated to 13,000, with a normal differential count, and the sedimentation rate was rapid, 45 mm. per hour. A chest film showed an infiltration in the right lower lung field. I considered a likely diagnosis to be a partially resolved primary atypical pneumonia, prescribed a tetracycline in the dosage of 250 mg. every 4 hours, and asked the patient to remain at home in bed for one week.

At the end of this week, he felt better, his temperature reached only 99.5°F. in the afternoons, but another chest film showed that the infiltrate persisted in the right lower lung field, and his white blood count had risen to 16,000. The sedimentation rate remained rapid, 44 mm. per hour. First and second strength tuberculin skin tests were negative. Neither chest pain nor cough developed. Careful questioning failed to reveal exposure to any noxious agents or contact with infectious persons or animals. It was only many months later, after the patient had recovered, that an article in the *New Yorker* on histoplasmosis reminded him that he had cleaned an abandoned chickenhouse in October, 1958.

On Feb. 2, 1959, he was admitted to Baptist Memorial Hospital, Memphis, for further study.

*From the Department of Medicine, University of Tennessee College of Medicine, Memphis, Tenn.

There postero-anterior and lateral roentgenograms of the chest, along with laminagrams, demonstrated a right hilar mass depressing and distorting the lower lobe main stem bronchus, with an infiltration extending laterally and posteriorly into the upper portion of the right lower lobe (Fig. 1-A, B). On Feb. 6, Dr. Duane M. Carr performed a bronchoscopic examination, which was negative. Bronchial washings were negative for tumor cells, acid-fast organisms, fungi, or any pathogenic bacteria. Samples of sputum, blood, and sternal marrow were examined directly and by culture; none revealed any abnormality. Roentgenograms of the hands and feet were normal; there was no evidence of sarcoidosis. Further chest films indicated a persistence of the hilar mass and peripheral infiltrate; the hilar mass was perhaps somewhat enlarged. A skin test for histoplasmosis was positive and interestingly, excited a week-old negative tuberculin skin test to become positive. Later serologic tests for the whole yeast antigen of *Histoplasma capsulatum*, performed at Kennedy Veterans Administration Hospital, were reported indicative of an active infection; the positive titer was over 256.⁴ During the period of hospitalization the patient remained asymptomatic, except that his temperature rose each afternoon to 99.5 or 100.0°F., the white blood count ranged from 16,000 to 19,000, and the sedimentation rate continued rapid, at 45 mm. per hour.

On March 3, 1959, Dr. Duane M. Carr performed a thoracotomy. A nodular lesion was found in the periphery of the right lower lobe, and a wedge resection of this was done. Frozen section examination proved it nonmalignant. The mediastinal mass turned out to be enlarged lymph nodes with caseous centers. Material from an enlarged node was aspirated and sent to the laboratory, along with the resected nodule, for cultures and tissue study. All cultures were negative, and the tissue study revealed a chronic,

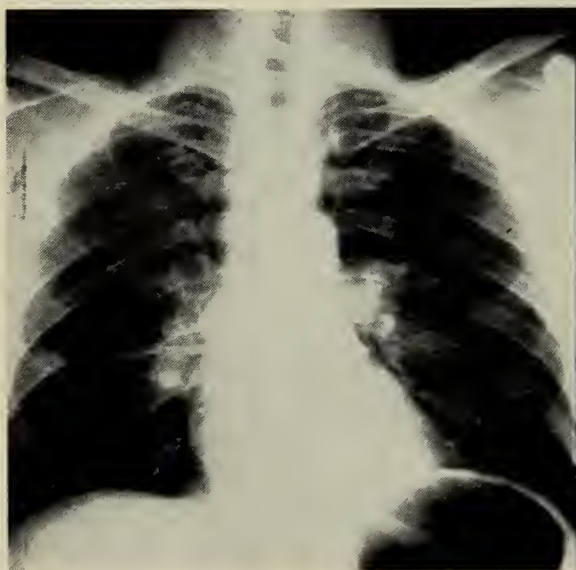


FIG. 1 (A).



FIG. 1 (B).

granulomatous, caseating lesion; neither acid-fast nor other organisms were identified.

The patient's postoperative course was smooth and uneventful, and he was discharged from the hospital on March 12. While awaiting the laboratory reports, isoniazid and para-amino-salicylic acid were given as precautionary measures. These were discontinued in about 6 weeks when the cultures were reported negative for acid-fast organisms. The diagnosis of histoplasmosis being probable, the patient was continued on bed rest and given Gantrisin¹ for approximately 3 months. He remained asymptomatic, was gradually rehabilitated, and slowly resumed normal activity. He has continued healthy and free of symptoms. Follow-up chest films have not revealed any evidence of a recurrent infection. The most recent film, of April 12, 1961, is shown (Fig. 2).

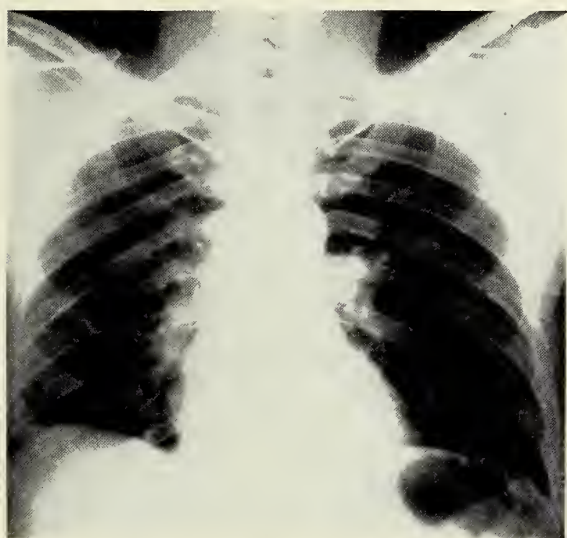


FIG. 2.

Comment

The clinical and roentgenographic pictures in this case are compatible with a num-

ber of entities: Hodgkin's disease, lymphoma, carcinoma, tuberculosis, sarcoidosis, and histoplasmosis, to mention a few. The evidence favors a diagnosis of histoplasmosis on the basis of the positive skin test and the positive serologic studies, the history of cleaning an abandoned chicken-house 3 months before the illness began, failure to demonstrate acid-fast organisms in a caseating, granulomatous lesion, and the apparently spontaneous remission of the active process. Inability to demonstrate the organisms *Histoplasma capsulatum* has been stressed.³ It may be added that the disease is indigenous in western Tennessee.

No apology is needed for the surgical explorations. Histoplasmosis may take many forms,⁵ and when it resembles a neoplasm,² surgery may be the only recourse for excluding a diagnosis of a malignancy.

Of interest is that the patient remains well.

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STAFF CONFERENCE

Vanderbilt University Hospital* Cushing's Syndrome

DR. JOHN FOSTER: The subject for discussion today is Cushing's Syndrome. Dr. Main will present a patient who is currently in the hospital.

DR. BEACHLEY MAIN: This 19 year old white man was admitted to Vanderbilt University Hospital for the first time on March 16, 1961, because of weakness and fatigue. The present illness probably dated back about six to eight months prior to admission when he first noted unusually easy fatiguability. This was followed by a rapid weight gain to 180 pounds for which he was hospitalized at home on Nov., 1960. He was placed on a diet and lost about 15 pounds. He was subsequently hospitalized twice for weakness, with persistent leucocytosis of 15,000-17,000 and with red blood cells in his urine. During the past 3 months prior to admission, he developed a "moon-faced" appearance, low back-ache, acne over the trunk, headaches, marked weakness and alleged hypertension. He had had no cardiopulmonary, gastrointestinal, or urologic symptoms.

On physical examination B.P. was 100/80, P. 100, R. 20, and T. 98° orally. He was a round-faced, young man with truncal obesity. There was a suggestion of a "buffalo hump" over the upper thoracic spine. Visual fields were full and no abnormalities of the optic discs were noted. Thyroid was not enlarged. Examination of the heart, lungs, abdomen, genitalia, and rectum were normal.

Laboratory results revealed a PCV. of 50 and WBC. count of 7,700 with a normal differential, platelets, bleeding and clotting time. One serum calcium was 7.8 mg.%, but two subsequent determinations were normal. Serum electrolytes, fasting blood sugar, and liver function studies were normal. Urinalysis was negative. Glucose tolerance test revealed the blood sugar slightly elevated to 168 mg.% at 2 hours and 159 mg.% at 3 hours without glycosuria. Baseline urinary 17-hydroxycorticosteroids averaged 20 mg. with an unusually wide variation from 9 to 39 mg. per 24 hours. ACTH stimulation on two occasions resulted in increases to 53 and 72 mg. respectively. There was no suppression of 17-hydroxycorticosteroid production on either small or large doses of dexamethasone. Electrocardiogram revealed no abnormalities. Skull and chest x-rays were normal. X-ray studies of the abdomen, intravenous pyelograms, and intravenous aortograms showed no abnormalities. He was transferred to the Surgical Service and taken to

the operating room on April 5, 1961.

DR. JOHN FOSTER: Dr. Liddle, would you please tell us of the endocrinologist's approach to a patient suspected to have Cushing's syndrome?

DR. GRANT LIDDLE: Cushing's syndrome is to be suspected when patients present the manifestations listed in Table 1.

Table 1.

INCIDENCE OF MANIFESTATIONS OF CUSHING'S SYNDROME IN A SERIES OF 33 PATIENTS	
I. Clinical Manifestations	33/33
Protein Wasting	26/33
Osteoporosis	22/30
Ecchymoses	22/33
Striae	17/33
Impaired Glucose Tolerance	26/31
Hypertension	24/33
Central Obesity	31/33
Mental Aberrations	13/33
Menstrual Aberrations	13/17
Weakness	18/33
Edema	8/33
Hypokalemia	3/33
II. Elevated 17-OHCS	33/33
III. Abnormal Resistance to Pituitary-Adrenal Suppression	33/33

The frequencies with which various manifestations occur in patients with Cushing's syndrome are also given in the table. Unfortunately for the clinician these manifestations are rather nonspecific. Each manifestation is seen in the absence of Cushing's syndrome, and most patients with Cushing's syndrome exhibit only a fraction of the manifestations which are listed. While the clinical picture alone is sometimes sufficiently clear to enable one to make a firm diagnosis of Cushing's syndrome, it is frequently necessary to confirm the clinical diagnosis by means of special studies of adrenocortical function. Cushing's syndrome is now known to be due to a chronic excess of cortisol (hydrocortisone), and the special tests which are pertinent to the evaluation of this disorder include, (1) determinations of cortisol secretion rate, (2) assays of plasma cortisol, and (3) assays of urinary cortisol metabolites, so-called "17-hydroxycorticosteroids." These measurements are made not only under "control" conditions but also during standard treatment with corticotropin (ACTH), dexamethasone, or Metopirone (SU-4885). The detailed procedures and the results obtained with these tests have been described previously.^{1,2,3}

In our laboratory the most practical index of cortisol secretion has been the quan-

*From the Department of Surgery, Vanderbilt University School of Medicine and Vanderbilt University Hospital, Nashville, Tenn.

tity of 17-hydroxycorticosteroids in the urine. Normal adults usually excrete 3 to 12 mg. of 17-hydroxycorticosteroids per 24 hours. Occasionally very large and active individuals excrete greater quantities. One can gain some idea about the accuracy of urine collection and at the same time make an adjustment for body size by relating the quantity of 17-hydroxycorticosteroids to the quantity of creatinine in the urine. Normal individuals excrete from 4 to 8 mg., and patients with Cushing's syndrome almost always excrete more than 10 mg. of 17-hydroxycorticosteroids *per gram of creatinine*.

The fact that patients with Cushing's syndrome secrete such large quantities of cortisol suggests that the pituitary-adrenal system of these individuals is abnormally resistive to the suppressive influence of cortisol-like steroids. This abnormal resistance can readily be demonstrated by observing the response to dexamethasone, a potent synthetic steroid which, like cortisol, is capable of suppressing ACTH secretion. When normal subjects are treated with dexamethasone 0.5 mg. every 6 hours, their urinary 17-hydroxycorticosteroids fall to less than 2.5 mg. per 24 hours by the second day of treatment. When patients with Cushing's syndrome are similarly treated, their 17-hydroxycorticosteroids do not fall to a comparable degree, remaining at or above 5 mg. per day. This diagnostic maneuver is, therefore, valuable in separating patients who have true hyperadrenocorticism from those who do not. It is also possible to carry the suppression test one step further in an effort to separate patients who have Cushing's syndrome due to autonomous adrenocortical activity (adrenal tumors) from those who have ACTH-dependent (bilateral) adrenocortical hyperfunction. In response to dexamethasone 2.0 mg. every 6 hours (equivalent, physiologically, to more than 240 mg. of cortisol per day), patients with ACTH-dependent hyperadrenocorticism almost always exhibit distinct decreases in urinary 17-hydroxycorticosteroids. This response has been observed in 28 out of 31 cases of ACTH-dependent hyperadrenocorticism studied in our unit. Of the 3 exceptions, 2 were patients with

"ACTH-secreting" tumors of the lung and one was the patient described in this report. In all 3 cases corticotropic activity was demonstrated in the plasma, leaving little doubt as to the cause of the adrenocortical hyperactivity. The fact that adrenocortical activity was demonstrated to be suppressible in the other 28 cases may also be taken as an indication that the hyperadrenocorticism of these patients was ACTH-dependent, since the only way in which dexamethasone is known to affect adrenal function is through suppression of ACTH secretion. In contrast to most patients with ACTH-dependent hyperadrenocorticism, those with Cushing's syndrome due to autonomously functioning adrenal tumors fail to show significant, reproducible decreases in 17-hydroxycorticosteroid excretion when treated with large doses of dexamethasone. This "absolute" resistance to the suppressive influence of exogenous corticosteroids has been observed in all 10 of the patients with Cushing's syndrome due to adrenal tumors who have been studied in our unit. It is possible, therefore, to state with a very high degree of probability that patients either have adrenal tumors or extra-adrenal malignancies if their 17-hydroxycorticosteroids cannot be suppressed significantly with large doses of dexamethasone.

Further diagnostic information can be obtained through observations of responses to standard intravenous infusions of ACTH. In normal adults and patients without Cushing's syndrome, urinary 17-hydroxycorticosteroids usually rise to 20 to 40 mg. per 24 hours in response to the continuous infusion of 50 units of ACTH over a period of 8 hours. Greater responses are shown by about 5% of the "non-Cushing" population and by over 90% of patients with Cushing's syndrome due to bilateral adrenal hyperfunction. Patients with Cushing's syndrome due to adrenal carcinoma rarely respond to a single infusion of ACTH. A small majority of patients with benign adrenal adenomas respond excessively to exogenous ACTH while a sizeable minority respond subnormally or not at all.

Still another diagnostic maneuver which can be employed is the standard Metopirone (SU-5885) test. Patients with ACTH-

dependent Cushing's syndrome generally respond to this 11β -hydroxylase inhibitor with an increase (often a supernormal increase) in urinary 17-hydroxycorticosteroids. Such increases have not been observed in patients with Cushing's syndrome due to autonomous adrenocortical tumor.

With proper use of these tests it is almost always possible to diagnose the cause of Cushing's syndrome without resorting to surgical exploration of the adrenals. In the present case, however, the failure of the 17-hydroxycorticosteroids to fall significantly in response to large doses of dexamethasone suggested that the patient might have an adrenal tumor even though adrenal tumors which are responsive to exogenous ACTH are extremely rare in males. It was felt mandatory, therefore, that this particular patient undergo adrenal exploration.

DR. JOHN FOSTER: Dr. Harris, how does the urologist localize an adrenal tumor?

DR. A. PAGE HARRIS: When, from the laboratory data, one strongly suspects an adrenal tumor as the etiologic basis for Cushing's syndrome, efforts directed toward its lateralization should be instituted. In step-wise fashion, one should obtain intravenous urography followed by simultaneous aortography and retroperitoneal carbon dioxide insufflation. In the presence of large tumors (> 7 cm.) intravenous urography usually suffices since a tumor of this size often displaces the kidney. Occasionally one will be misled by a disproportionately large hyperplastic adrenal. Keeping in mind the fact that small tumors (< 3 cm.) seldom lend themselves to localization, aortography and retroperitoneal insufflation of carbon dioxide will often clearly demonstrate the tumors of intermediate size (3-7 cm.).

DR. JOHN FOSTER: Dr. Allen, would you please interpret the roentgenograms in the present case?

DR. JOSEPH H. ALLEN: Films of the chest, abdomen, skull, and intravenous pyelograms, made between March 17 and April 3, 1961, were all within normal limits. Bone structure appeared normal. An intravenous aortogram was performed on April 4, using the routine technic at this

institution. This consists of 100 cc. of 75% Hypaque injected in equally divided doses into both antecubital veins with film timing determined by the Decholin circulation time. Good visualization was obtained and no abnormality was noted. Specifically, no evidence of adrenal tumor is seen.

DR. JOHN FOSTER: Dr. Scott, would you discuss the surgical treatment of Cushing's syndrome and tell us of the operative findings in this patient?

DR. H. WILLIAM SCOTT, JR.: During the last 7 years at the Vanderbilt Hospital we have explored the adrenal glands in 18 patients with Cushing's syndrome. Ages have ranged from 9 months to 47 years and there were 12 females and 6 males in the group. Six of the patients proved to have an adrenal cortical tumor and 2 of these tumors were malignant. In the other 12 patients bilateral hyperplasia was present, although in one of the latter a small adrenal cortical adenoma was also present in a hyperplastic gland. Sixteen of these patients survived the operation and have shown generally good results. Two patients were lost in the immediate postoperative period. One of these was a small child with a huge adrenal cortical carcinoma which had invaded the suprarenal vena cava and renal veins, producing a fatal anuria. Another patient had bilateral hyperplasia with extensive purpuric manifestations and died from postoperative bleeding. Her death should have been preventable.

Our findings at operation in these 18 patients have validated Dr. Liddle's preoperative endocrine detective work and have confirmed his ability to predict the presence of a functioning tumor as distinct from hyperplasia on the basis of the urinary 17-hydroxycorticosteroid responses to stimulation and suppression. In the patient under discussion these responses were confusing although tumor was suggested. Laminograms, pyelograms and aortograms failed to support this impression, however, and did not lateralize the tumor. Accordingly, Dr. Harris and I explored both adrenal glands using bilateral posterior incisions. No tumor was identified but rather each gland was hypertrophied. Total removal of each adrenal was carried out without event and the pro-

cedure was well tolerated by the patient.

In most of the patients who have been operated on here for Cushing's, we have used a long, transverse, or bucket handle upper abdominal incision. This type of incision permits one to examine both adrenal glands and if a tumor is present and unilateral exposure inadequate, the incision can be extended into the ninth interspace to improve exposure. Transabdominal exposure of the right adrenal is accomplished by incising the posterior peritoneum in the subhepatic fossa lateral to the descending duodenum. Usually the right gland can be exposed in this manner without difficulty, although at times it lies well up beneath the right lobe of the liver and requires extensive retraction upward of that organ. On the left side using the transabdominal approach we have usually gained access to the adrenal fossa by dividing the splenorenal and lienocolic ligaments and mobilizing the spleen and stomach medially. This provides good exposure and may be especially valuable if a large tumor of the left adrenal is present. A disadvantage is that a fairly extensive retroperitoneal dissection is needed, and it is all too easy to lacerate the splenic capsule during the mobilization of this organ or by retraction after mobilization has been completed. I am afraid we have removed several spleens in this institution during the course of left adrenalectomy following this technic. Another avenue of approach to the left adrenal using the transabdominal route is that recently described by Dr. James Hardy. This involves incising the root of the transverse mesocolon to the left of the midcolic vessels in an avascular area and dissecting upward beneath the tail of the pancreas, exposing in turn the left adrenal vein and then the adrenal gland. I believe this exposure is preferable to that involving mobilization of the spleen unless a large tumor of the gland is present. The disadvantages of the transabdominal approach are related to the extreme truncal obesity of so many patients with Cushing's syndrome, the poor quality of the abdominal musculature in these protein depleted patients with the prospect of postoperative dehiscence and the fact that a great deal of retraction of intraperitoneal

viscera is required with resultant need for postoperative gastrointestinal suction and other adjuvants to combat the inevitable postoperative ileus. In the last few patients we have become interested in using the posterior approach to the gland. This was originally popularized by Dr. Hugh Young, the late urologist, at Hopkins. The incision should extend obliquely down from the 10th rib level across the length of the 11th and 12th ribs. If only the 12th rib is resected, the exposure at times may be rather limited. More extensive exposure can be obtained by dividing or resecting the 11th rib as well as the 12th, and if desirable the diaphragm may be incised. We believe the adrenal gland can be more directly approached and more readily visualized using this posterior approach than by the transabdominal method. Retracting the kidney downward aides greatly in bringing the gland in view, and the use of Cushing clips to control the adrenal blood supply facilitates excision of the gland. The advantages of the posterior approach include not only the direct exposure of the gland but also the minimal discomfort and ileus in the postoperative period. A bilateral simultaneous posterior approach permits inspection of both adrenal glands and such inspection I believe is quite desirable in the accurate appraisal of the pathologic state of the glands in Cushing's syndrome. Even when a tumor is present and can be lateralized preoperatively, examination of both glands gives valuable correlative information, and Mark Hayes of New Haven has pointed out that approximately 10% of adrenal cortical tumors are bilateral lesions.

DR. JOHN FOSTER: Dr. McSwain will tell us of the gross and microscopic studies of the surgical specimen.

DR. BARTON McSWAIN: The normal adrenal gland ranges from 3 to 5 cm. in length, a little bit less in width, and 0.4 to 0.6 cm. in thickness. Its average weight is from 3.5 to 5.0 Gm. The left one is usually the larger. On this patient the left adrenal measured 6 x 3 x 1 cm. and weighed 15 Gm. The right adrenal measured 5 x 2 x 0.5 cm. and weighed 12 Gm.

The microscopic examination of the left adrenal gland showed that the normal zones



FIG. 1.

(glomerulosa, fasciculata and reticulosa) were present and normal (figure 1). The cells were perfectly normal throughout. There were some nodules on the surface of the gland which were well encapsulated and contained normal looking adrenal tissue. These areas are called cortical nodules and perfectly normal. They are not adenomas.

The right adrenal gland also showed no evidence of anything abnormal.

Thus, microscopically both adrenal glands were perfectly normal and grossly they were normal except for the size and weight. On that account the final diagnosis was hypertrophy of the adrenal gland, bilateral.

DR. JOHN FOSTER: Dr. Headrick, what has been the postoperative course in this patient?

DR. JAMES HEADRICK: The postoperative course has been uncomplicated. Dexamethasone phosphate and fludrocortisone have been used for steroid replacement. He received 9 Gm. of salt daily; this was given parenterally for the first two postoperative days. He has remained afebrile; serum electrolytes have remained within normal limits. The patient is now ambulatory and is taking a regular diet.

DR. JOHN FOSTER: Dr. Liddle, what will be the future course of this patient?

DR. GRANT LIDDLE: The patient who is subjected to treatment of Cushing's syndrome is confronted with several problems.

First, he has the risk of operative complications. I have known of patients who have died as a result of postoperative wound infection, hemorrhage, intestinal obstruction related to postoperative adhesions, and li-

gation of the aorta. This patient's operation has been uncomplicated, and no difficulties are anticipated in the future.

Second, there is a slight risk that the adrenal hyperfunction will recur. This is common following subtotal adrenal resection but rare following total bilateral adrenalectomy (presumably because of the rarity of significant amounts of accessory adrenal tissue in man). In the event that this patient should develop a recurrence, we could carry out a "medical adrenalectomy" with DDD,⁴ or, if that failed, we could diminish his pituitary activity by means of external irradiation, implantation of radioactive gold, or even hypophysectomy.

Third, a small percentage of patients with Cushing's syndrome develop large pituitary tumors following bilateral adrenalectomy.⁵ If this occurs, irradiation and, if necessary, surgical removal of the tumor will be performed.

Fourth, the secondary complications of hyperadrenocorticism, such as cardiovascular-renal disease or osteoporosis, may persist after the endocrinologic disorder has been corrected. This patient had no serious complications of Cushing's syndrome, presumably because the total duration of his illness was short. The manifestations of weakness, central obesity, "plethora," acne, cutaneous striae, and impaired carbohydrate tolerance are expected to disappear during the next few months.

Fifth, the patient is faced with the problem of living with Addison's disease. Intelligent life-long cooperation with a careful regimen of adrenal substitution therapy is essential. With such cooperation the prognosis for a long and productive life is excellent. The details of such a regimen are given elsewhere.⁶

DR. JOHN FOSTER: I wish to thank all of the discussors for participating in the staff conference.

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CLINICOPATHOLOGIC CONFERENCE

Veterans Administration Hospital*

Alveolar Cell Carcinoma

On April 29, 1960 the patient was admitted to the Nashville VA Hospital for the first time, as a transfer from another VA Hospital. He was a 66 year old negro man who was in good health until 5 months prior to admission, when he noted the onset of increasing shortness of breath accompanied by cough and white sputum. In Dec. 1959 and early 1960, chest x-ray films were read as negative. In March 1960, before admission to the hospital, a chest film was interpreted as showing bilateral nodular infiltrate. The patient has worked 40 years doing outside work except 4 hours per week at which time he swept the floor in an area where tobacco was handled. He was never a miner, welder or farmer. There was an associated weight loss. Chest films in the hospital also revealed a dense confluent infiltration throughout both lung fields. Films of the hands revealed punched-out lesions suggestive of sarcoid. Numerous sputum samples cultured for acid-fast bacilli were negative at another VA Hospital. He did not have night sweats, chills, chest pain or hemoptysis.

Physical Examination. B.P. was 110/80, P. 90, with frequent premature ventricular contractions, R. 35. The patient was a well developed, fairly well nourished negro man in moderate respiratory distress. There was no cyanosis at the time of admission, nor clubbing, and without edema. Fundi unremarkable. The scleras were clear, and throat negative. The neck was supple, the thyroid normal, and neck veins were flat. There was good expansion of the chest; generalized dullness to percussion was present. Some wet rales were present over the entire lung fields, with increased breath sounds throughout. Heart was normal size, numerous extrasystoles noted, but no murmurs were present. Pulses were normal. The liver was down 3 fingerbreadths and tender. There was no peripheral edema.

Laboratory Findings. Serum electrophoresis revealed a decreased A/G ratio. Arterial oxygen saturation was 74.7%, rising to 88% on oxygen. Arterial CO₂ was 19.6 (normal 21) and arterial pH 7.35. EKG. revealed numerous premature ventricular contractions, abnormal P-waves and right axis deviation was suggestive of right ventricular hypertrophy. Liver biopsy revealed a normal architectural pattern. Bone marrow culture was sterile and the marrow histologically was normal. PPD #2 and histoplasmin skin tests were positive. Small lymph nodes in a scalene

fat pad at biopsy were diagnosed as reticuloendothelial hyperplasia. Follow-up studies of oxygen saturation on May 24 was 59.48%. The hematocrit 50., WBC. count 10,867 with a shift to the left, BUN. 25 mg., FBS. 100 mg per 100 ml. Thymol was 3 units; total serum protein 6.8 Gm. with 3.6 Gm. of albumin. Alkaline phosphatase was 8. Electrolytes were normal. Calcium was 8.6 mg. Serologic tests for syphilis was negative. Urinalysis was unremarkable with a concentration up to 1.020 and no white or red cells or albumin in the sediment. Twenty-four hour urinary calcium was 42 mg. and 21 mg. on a second determination. Cephalin flocculation test showed a trace. Acid fast bacillus smears were negative. Histoplasmin complement fixation test was negative. Prothrombin time was 80%. A second BUN. was 18 mg. and CO₂ of 35.

X-ray Reports. (Figs. 1 and 2.) In a chest film on May 2, 1960, a markedly extensive nodular interstitial disseminated infiltrate with confluence of the individual nodules is spread throughout the entirety of both lung fields. Neither bony thorax, mediastinum or cardiac borders can be adequately delineated.

The above findings are consistent with the clinical impression of sarcoid. Films of the hand revealed small cyst-like areas in several of the distal ends of the phalanges.

Hospital Course. In spite of extensive investigation, the exact etiology of the patient's condition was not clarified. Sarcoid was suspected but not proved. The advisability of a scalene node biopsy on the opposite side was raised. Arterial oxygen saturation progressively decreased and on May 24, was 59.5%. It was clear that the patient had a diffusion defect of a severe nature and he required oxygen continually, without which he developed severe cyanosis. On May 31, he was placed on Tapazole, hoping that this might allevi-

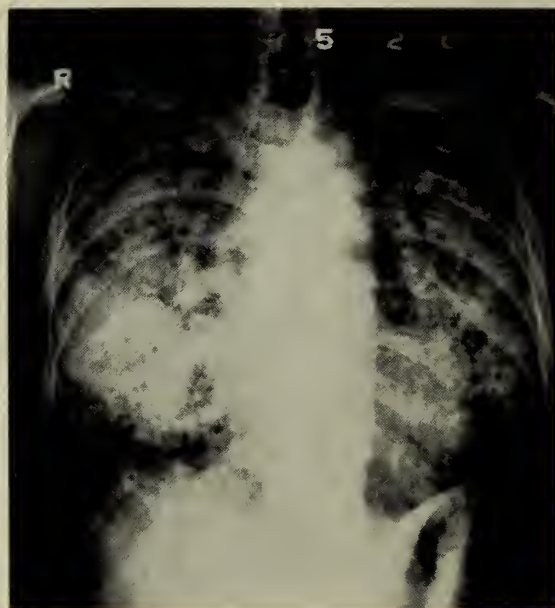


FIG. 1.

*From the Departments of Surgery and Pathology, Veterans Administration Hospital and Vanderbilt University School of Medicine, Nashville, Tenn.

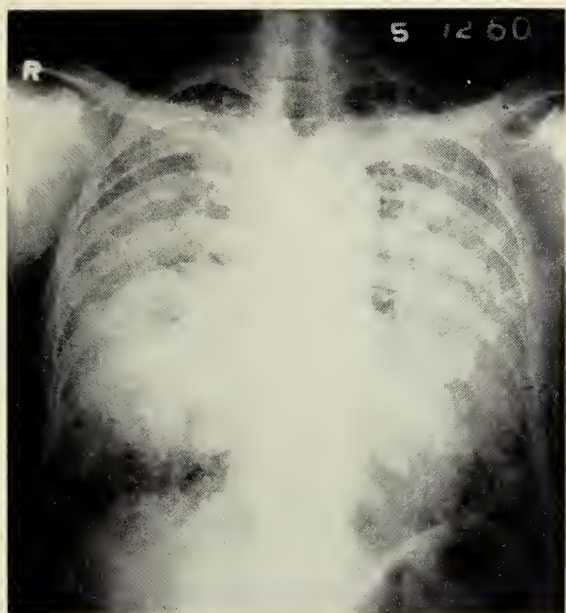


FIG. 2.

ate his dyspnea to some extent. On June 6, it was learned that he had a positive acid-fast culture at the first VA Hospital taken just prior to his transfer here and he was therefore transferred to the Tuberculosis Service for further care. He was placed on INH. He had been on steroids for several weeks.

Addendum—July 14, 1960: On the tuberculosis service the patient was continued on INH anti-tuberculous drug therapy; Tapazole therapy was discontinued. Also he was continued on nasal oxygen and steroids, receiving 20 mg. prednisone a day. There was no improvement noted in the patient's general well being or in his ventilatory function. Further sputum studies were still negative on smear, as was culture for acid-fast organisms, and no additional bacteriologic proof of pulmonary tuberculosis was obtained in this hospital. On June 23, the patient became apneic for a short period of time but after resuming respirations and return of consciousness it was not thought there was any significant change from previous day. On June 24, 1960 the patient died.

Discussion

DR. WALTER GOBBEL: The dominant features this patient presents from the initial onset until death were those of diffuse and progressive bilateral pulmonary infiltration, a clinical picture of alveolar capillary block in the presence of adequate alveolar ventilation, and an absence of any response to multiple therapeutic measures. The arterial oxygen unsaturation and CO_2 retention which became worse during the course of his illness is in keeping with the picture of alveolar capillary block. Arterial

oxygen unsaturation also may be associated with right-to-left intracardiac shunts and with pulmonary A-V fistula; but in this elderly colored man without previous illness and without evidence of heart murmurs there is nothing to suggest cardiac right-to-left shunting. The roentgeograms of this patient's chest in no way suggest either isolated or multiple pulmonary A-V fistulae. Thus, in arriving at a correct interpretation of this man's underlying illness the various disease entities that may produce an alveolar capillary block must be considered, such as: diffused pulmonary sarcoidosis, berylliosis, eosinophilic granuloma, pulmonary manifestations of the collagen diseases, certain chronic pneumonias and postpneumonic states, asbestosis, acute military tuberculosis, silo filler's disease, bronchiolar carcinoma, metastatic carcinoma with lymphogenous spread, and reaction to certain hypertensive drugs—notably hexamethonium and hydralazine.

The failure to demonstrate tubercle bacilli in repeated sputum examinations plus the failure to have the clinical course altered with intensive streptomycin, INH., and steroid therapy tends to rule out this as a possible cause of his basic problem. Since this man never worked around volatile gases, it is unlikely that he has developed a bronchiolitis fibrosa obliterans. He never worked as a welder nor in the mining industry. He did not work in the presence of irritating dust. This would tend to rule out asbestosis, bagassosis and byssinosis, as well as many of the more common pneumoconioses. From the history it is unlikely that this patient ever worked in the presence of beryllium dust, and since fluorescent light bulbs have not contained beryllium compounds since 1949 it is unlikely that beryllium is a causative agent in this man's disease process.

Boeck's sarcoidosis was strongly suspected as a diagnosis, and many of the clinical features of sarcoidosis are present. The insidious onset, the diffused bilateral pulmonary infiltration, the punched-out bony lesions in the distal phalanges of the hands, and the relatively small amount of sputum production are suggestive of sarcoidosis. However, the absence of peripheral lymphadenopathy, the absence of pulmonary hilar adenopathy,

a normal liver biopsy, normal serum calcium, normal serum phosphorus and a normal 24 hour urine excretion of calcium are factors suggesting the absence of sarcoidosis here. In addition, there was no evidence of leukopenia, eosinophilia, elevation of serum alkaline phosphatase and elevation of serum globulin to suggest sarcoidosis. And finally, a biopsy of the left supraclavicular lymph node, which was not clinically enlarged, showed no evidence of Boeck's sarcoid.

The absence in the history of the patient having received drugs known to produce alveolar capillary block and the fact that this man was a normotensive and thus supposedly never received antihypertensive drugs such as hexamethonium and hydralazine, does not argue well that this process is based on drug reaction.

If this process is due to lymphangitic spread of a primary lung carcinoma then one would most likely see evidence somewhere in the roentgenogram of the chest of a primary carcinoma. This is absent. If this process is due to lymphangitic and/or hematogenous spread of metastatic tumor originating outside of the chest cavity then one would hope for some suggestive evidence for location of the primary site. Carcinoma of the kidney occasionally will metastasize to the lungs in a diffuse manner, but nowhere in this history or subsequent clinical course is there a suggestion of renal involvement, nor were any abdominal masses palpated other than the lower margin of the liver. Repeated urine examinations were all within normal limits, and the patient never experienced any gastrointestinal symptoms or abdominal complaints.

Another entity that could present itself in this patient is that of bronchiolar carcinoma. This process is frequently insidious in onset, may be rapidly progressive in nature, and contrary to frequently expressed views may be present in the absence of voluminous sputum. Hemoptysis, infrequent in bronchiolar carcinoma and metastases, although not unusual to the hilar lymph nodes, is rare to areas beyond the confines of the chest cavity. Although this entity has been frequently documented as arising in a limited area in the lung parenchyma, it may diffusely spread by intrabronchial dissemination throughout all of the pul-

monary parenchymal areas. Papanicolaou smears of the sputum are frequently helpful in diagnosis of such cases, but this diagnostic procedure was not carried out in this case. Bronchiolar carcinoma is frequently misdiagnosed clinically as sarcoidosis, silicosis, bronchopneumonia, metastatic carcinoma, fungus disease, bronchiectasis, and atypical pneumonia. This patient's clinical picture was not one of a progressive inflammatory process. Although steroid therapy does not give beneficial response in all cases of Boeck's sarcoid, a beneficial response can be expected in the majority of cases. The absence of such response to steroid therapy would suggest that this entity is one of carcinoma. Thus, in the absence of evidence of a primary tumor I think the most likely diagnosis in this case is that of bronchiolar carcinoma, with death due to the sheer extent of the pulmonary involvement causing an arterial oxygen unsaturation by the nature of the alveolar capillary block produced. Cor pulmonale due to increasing resistance in the lesser circulation was also present as suggested by electrocardiograph changes and the presence of an enlarged liver, but was of secondary significance in this case.

Clinical Diagnosis: Bronchiolar carcinoma.

Pathology Discussion

DR. ROBERT W. SOMMER. At autopsy, the lungs were large and adherent to the pleural cavities. The cut surface presented a rather uniform grayish-white appearance as seen in figure 3. There was very little mucus seen on the cut surface or in the bronchi. The prosector estimated the lung weight between 2000 and 3000 grams. He did not weigh them at the time because he felt the gross appearance suggested tuberculosis pneumonia and he wanted to limit the areas contaminated by the lung. As you can see from the picture there is very little remaining uninvolved lung parenchyma at the medial margin of the left upper and lower lobes. Microscopically, (Fig. 4) multiple sections from the lungs revealed a tumor which either has grown through the pre-existing lung as a framework much as a vine grows on a supporting structure, or which has replaced the lung but mimicked its structure. This is the typical appear-



FIG. 3.

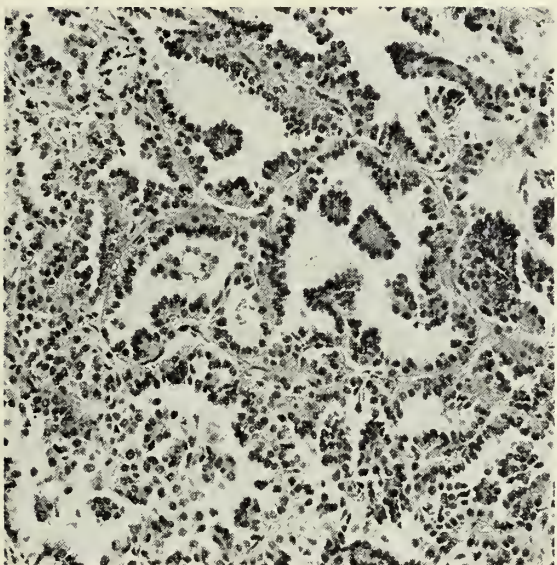


FIG. 4.

ance of an alveolar cell carcinoma. The alveolar like spaces, however, are much larger than those in a normal lung and the septa are much thickened. Occasional microscopic foci of uninvolved lung tissue can still be recognized.

The heart weighed 390 grams. There was dilatation and hypertrophy of the right chamber. The coronary arteries were only moderately involved with atherosclerosis but multiple microscopic patches of scarring were present as seen in figure 5. I interpret this scarring as due to the poor oxygenation resulting from replacement of lung tissue by tumor. There was also mod-

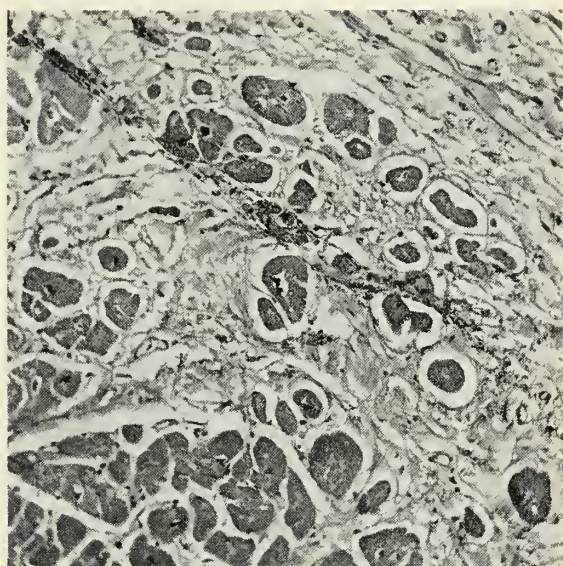


FIG. 5.

erate passive congestion in the liver because of right-sided heart failure.

In spite of the massive tumor involvement of the lungs, distant or regional metastases were not found. No other important findings were present in the case. The cystic lesions in the phalanges could not be biopsied at autopsy without defacing the hands and, therefore, I am not able to explain them pathologically.

Alveolar cell carcinoma is difficult to diagnose clinically and often the final diagnosis is made either at an exploratory operation or at autopsy. Papanicolaou smears may be of aid in diagnosis. There are two basic patterns of growth. One is a diffuse involvement as in the present case and the other is a multinodular form in which large gross nodules will be separated by uninvolved lung tissue. In the earlier literature, alveolar cell carcinoma and pulmonary adenomatosis were described as separate entities but most writers now feel that they are identical. A most interesting sidelight is the presence of similar tumors in mice, sheep, goats and horses. In sheep the disease is called Jagziekte and it is infectious. In Iceland Jagziekte became epidemic and decimated sheep herds. A similar tumor process has been elicited in mice chemically.

Anatomical Diagnoses:

1. Alveolar cell carcinoma.
2. Cardiac hypertrophy and dilatation, right side.
3. Myocardial fibrosis.
4. Passive congestion of liver.

President's Page



WILLIAM O. VAUGHAN,
M.D.

Words of warning were uttered by a prominent United States Senator at the recent medical legislative conference conducted by the American Medical Association in Chicago. Senator Robert Kerr, Oklahoma, was the speaker. His remarks touched on the following areas.

As physicians, we face a crisis in human relations when we place the results of the laboratory ahead of the old maxim that "the care of the patient begins with the caring for the patient". Of necessity, this has created specialties and sub-specialties. The patient expects and demands the best care that is available. This sometimes strains the traditional doctor-patient relationship, so essential for good medical care. While the patient wishes to retain the old fashioned doctor cordial relationship, he demands the time consuming impersonal results of the test tube held in the hands of the busy physician.

The modern day stresses of living have made necessary more understanding of the problems of our patients, and accentuates their need for guidance. As modern sciences create miracles in cures, the present day patient needs and seeks more rather than less personal attention from physicians.

The profile of the present day physician is constantly changing. Physicians must take time to assume other obligations of citizenry besides doing their job and paying taxes. Physicians should not come forward only when political solutions which affect them are proposed, but should be interested in all facets of local and federal government which make for freedom of thought and performance.

Physicians must prove to the public that the private practice of medicine is the best solution to the medical needs of our generation. Many forces are promoting socialistic answers to the questions of medical care for the aged at the present time. These forces, however, cannot be successful without the support of the general public. Doctors should go the limit with their influence to the public not to give that support by giving the public the true picture of the real needs. Present day American Medicine has a good medical care package to offer to the public. Physicians cannot allow the political opportunists to promote and sell a package which is not in the best public interest.

American Medicine favored the passage of the Kerr-Mills Law which helped to further implement needed medical service to the aged. That bill is now the law of the land. Let us insist that it be given a chance to prove itself. If physicians will thoroughly acquaint themselves with its provisions, they will realize that it does not represent a retreat from our principles. Still the most important ingredient of our medical care package is the physician-patient relationship. The public's profile of the physician controls the public belief in the medical profession.

Is the medical profession equal to the demands facing it in 1961? This is the paramount question which individual doctors and medical societies must ask themselves within the course of the year. During 1961 Medicine will continue its battle in Congress against compulsory health schemes. But if it is to win this battle, doctors at the local level have a long range job of reestablishing a public awareness of the values of personal action in solving community problems as a keystone of our democratic system instead of passing such problems along to the federal government for solution.

President

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Address papers, discussions and scientific matter to R. H.
Kampmeier, M.D., Editor and Secretary, 8210 Vanderbilt
University Hospital, Nashville 12, Tennessee
Address organizational matters to Jack E. Ballentine,
Executive Director, 112 Louise Avenue, Nashville 5, Tenn.

R. H. KAMPMEIER, M.D., Editor and Secretary
Vanderbilt University Hospital, Nashville

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July, 1961

EDITORIAL

A CHECK LIST FOR DIABETIC MANAGEMENT

Effective medical therapy requires not only diagnostic, dietetic and pharmacologic acumen but also an "extra" which has been overlooked by many physicians in the daily rush to see all their patients within an allotted time. This "extra" is the physician's advice and counsel which teaches the patient to help himself through the complexities of his new disease. The successful completion of such a training program for the patient takes the physician above the humdrum of scientific medicine and places him squarely among those who practice medicine as an art. There is no doubt that patients will follow instructions better if the disease and its manifestations, complications and therapy are explained thoroughly. In no group of disturbances is instruction so important as in the chronic variety—hypertension, peptic ulcer, coronary artery disease and the like. Recogniz-

ing this important "extra" in medical therapeutics and realizing that advances in diet, insulin, hypoglycemic agents and plasma insulin levels will not in themselves provide the patient as much help as is now available, the American Diabetes Association at the 1961 annual meeting has approved a check list for the teaching of diabetic patients. It is hoped that this check list, as a guide, and expansion of it when advisable, will make management of the patient with diabetes mellitus more effective.

There are nine items on the check list for teaching diabetic patients.

1. DIET—The keystone of good therapy is diet. The use of oral hypoglycemics accentuates the need for careful dieting since many failures of oral therapy have been attributed to patients and, at times, physician carelessness about the importance of diet in management. The diabetic on insulin also requires a careful dietary attention. Unless the patient understands the role of diet in his particular case and how to modify a given diet to his tastes and needs he will be managed less effectively than is now possible.

2. URINE TESTING—There are a number of methods available for the testing of urine. Although not as economical as the old Benedict's test, the newer tests offer compactness, convenience and speed. The importance of knowing what a positive urine test means, when urine should be checked for sugar and acetone and, more important, learning the discipline which such a procedure encourages are meaningful objectives of this program.

3. ACTION OF INSULIN AND/OR HYPOLYCEMIC AGENTS—Much has been gleaned from the laboratory regarding the action of insulin and the oral hypoglycemics during the past few years. Although it is not necessary to know how a carburetor works to drive a car effectively, when trouble develops many miles from a service station such information can be invaluable. Since our diabetics will not be close to our "service station" always, the more they understand the less difficulty they can expect.

4. TECHNIC AND SITES OF INSULIN INJECTION—Many patients who will inject themselves 365 or more times per year are inadequately trained in the technics of

insulin administration. The need for frequently varying the site of injection is not emphasized to all patients.

5. CARE OF SYRINGE AND INSULIN—The care of the syringe and needle and its proper sterilization is a "must" in good diabetic management. As Americans travel more, so do American diabetics travel more. This means that patients must be taught to care for syringe, needles and insulin not only at home but on the road, on the sea and in the air.

6. SYMPTOMS OF HYPOGLYCEMIA—The most feared complication of insulin therapy by the patient is hypoglycemia. Patients must understand not only how to treat insulin shock but, far more important, how to prevent it. Good control of diabetes means freedom from not only hyperglycemia but also hypoglycemia.

7. SYMPTOMS OF UNCONTROLLED DIABETES—If a patient recognizes and begins prompt therapy as soon as symptoms of uncontrolled diabetes occur, a diabetic acidosis, diabetic coma and needless death can be prevented. In no condition is previous instruction so important and life saving.

8. CARE OF FEET—The marked drop in the number of amputations following a program of good foot care attests to the effectiveness of such instruction in managing diabetic patients.

9. WHAT TO DO IN CASE OF ACUTE COMPLICATIONS—Most cases of diabetic acidosis are preceded by an acute complication. The necessity for prompt management of both the acute complication and the diabetes cannot be over-emphasized. The well managed diabetic should never experience diabetic coma.

This check list, although lengthy, represents the minimum instruction necessary to train and manage effectively the diabetic patient. It is our sincere hope that physicians and interested organizations will not only use this check list for teaching diabetic patients but also devise similar check lists for other chronic illnesses. Only in this way can really effective medical therapy be instituted and maintained.

A. B. S.

THE SOCIAL SECURITY TAX

Some years ago comment was made on these pages with respect to the Social Security tax, its purpose, the promises implied in its collection and its actuarial or rather lack of actuarial soundness in light of its implied purpose.

In the following pages appears a report or impressions of the White House Conference for Aging by the Chairman of our Committee on Aging. In this report he points to certain trends and voices fears that have no actual relationship to the problem of aging but rather concern the road our government and legislators are traveling.

It reiterates a statement made before on these pages that though the social security tax is for the implied purpose of a welfare program for the people, it is not set up as such, but collections made in its name go into the big "kitty" to be used as legislators see fit.

When the Social Security tax was established in 1935 it required a 3% contribution on \$3,000 of income. It has moved now to 6% on \$4800. The current proposed expansion and medical care program provide for an increase of taxation of 11% on \$5000 by 1969. Your Editor cannot verify this, but it is no secret that pressure is being exerted to remove even the \$5000 ceiling and make Social Security payments be based on total gross income. If this were true it would be monstrous.

Originally the implied benefits of social security were to provide protection against destitution due to unemployment because of death, disability, or old age. (*However, it was not set up as an insurance program.*) It is said that in 1943 it was estimated that by 1957 Social Security benefits would total \$1.2 billion. However, this "kitty" is a vote-getter, and so by one amendment after another the 1957 expenditure was more than \$7 billion and by 1959 outgo was greater than income and will increase. This eventuality was pointed out on these pages some years ago since Social Security was not set up on sound actuarial premises, and could

only eventuate in the meeting of obligations from general tax funds.

It is said that historically no nation has ever survived a burden of taxation which takes one-third of its national income. We are now at the stage of 31% of our national income being contributed as taxes with 23% remaining in the hands of the federal government.

In spite of the predictable dip into general tax funds, one can only wonder why the liberal-minded in Washington are impatient of giving the Kerr-Mills bill a fair trial.

On the part of some it may be in a sincere belief that socialized medicine is the answer to the needs of medical care and thus, in the words of a Socialistic magazine, "Once the bill (Forand bill) is passed, this Nation will be provided with a mechanism of socialized medicine. . . ." Certain large labor unions openly desire a government health service. These pressure groups know it takes courage to go contrary to things which may be labelled as humane and kindly—so the cry for medical care based on emotional reactions offers a wedge for socialism which is difficult to resist.

Others, the bureaucrats, must move constantly to strengthen their influence. These are the permanent members of boards, bureaus and commissions who cannot be voted out of office—as civil service employees they cannot be removed—they are permanent fixtures and wield an influence irrespective of who may be voted into office by the people. They have jobs to protect and the more money they have, the stronger they become and the more they can influence policy.

A third group, who are impatient with the Kerr-Mills bill, represent, we hope, a very few of our citizens who are truly Communist and urge ever-increasing governmental spending to fulfill one of Lenin's maxims, namely, "The way to destroy capitalism is to debauch the currency. Through a process of planned inflation, a government can quietly and unobservedly confiscate the wealth of its citizens."

It is the mounting "give away" programs that worry thinking citizens. The basic

truth of Lenin's premise was recognized in a quotation attributed to a great American, Justice Oliver Wendell Holmes, "Strike for the jugular. Reduce taxes and spending. Keep government poor and remain free."

R. H. K.

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Special Item

The White House Conference on Aging Thomas Frist, M.D., Nashville, Tenn.

Probably no one in the T.S.M.A. has given as much time and thought to aging and its problems as the Chairman of the Committee on Aging. His thinking relative to the socio-economic aspects of this problem so much in the public eye deserves careful reading. The import of his comments, made before the Rotary Clubs of both Chattanooga and Nashville, goes way beyond the care of the aged, but more broadly applies to what our national philosophy is to be in the years to come.—Editor.

The best way to destroy the effectiveness of a talk is to apologize for making it. While I do not apologize for making this talk, I do feel quite inadequate and ill-prepared to discuss such an important subject as the Problem of the Aging—not being an economist, a sociologist nor a philosopher. It would certainly take a combination of these to give an adequate discussion of the various facets of the aging state.

However, I feel very strongly that it is the obligation and duty of every business and professional man, or, for that matter every citizen, to in some way make an attempt to contribute something to society, outside of his own small narrow and selfish world of restricted interest. It is because of this feeling that I became interested in the Problems of Aging.

I would like to begin and end my talk in a rather peculiar and, some might think, irrelevant manner, but which I think is a relevant matter—that is by quoting to you from a recent cartoon in one of our papers. I am sure most of you will recall it.

This cartoon showed a large picture of Nikita Khrushchev speaking. The cartoon was captioned: *Outer Space is Important, But Nikita Isn't Forgetting the Ground-work*, and then it quotes from Khrushchev, "We cannot expect Americans to jump from Capitalism to Communism, but we can assist their elected leaders in giving Ameri-

cans small doses of Socialism until they suddenly awake to find they have Communism."

To me this is the summation, the important point and the crux of the whole situation of the socio-economic state of our country, and I would like for you to keep this in mind as I tell you of my reaction to the White House Conference on Aging.

I would first like to give you a little background of my interest in the problems of the aging population. Several years ago, the Board of Trustees of the Tennessee State Medical Association foresaw that national attention would soon be focused on the problems of our senior citizens. The Board thought the medical profession should, insofar as possible, be in a position to play an integral role in formulating any activities which would deal with these problems. They asked me to serve as Chairman of the Committee on Aging of the Association.

It was immediately apparent that the socio-economic and political potential of this great segment of our population, some 16 million people, was rapidly becoming the subject of propaganda for labor, social workers, "do-gooders" and governmental agencies. So our committee thought we should immediately attempt to organize a Tennessee Council on Aging, which would be made up of many elements of society interested in, and concerned with these problems. Such a council was formed with some 35 statewide organizations as charter members. This is now a growing and successful organization composed in the main of representatives from business, professional, labor, farming and civic organizations.

Some 18 months ago, the President of the United States, in implementing the statute which set up the White House Conference on Aging for January 1961, asked each Governor to appoint a state planning committee for study of the problem at a state level. It was at this time that organized medicine realized the probability of radical and unrealistic representation in Washington. Therefore, we approached Governor Buford Ellington concerning the formation of his state committee. We apprised him of the existence of the Tennessee Council on Aging and suggested that he use this council

as a base for setting up the State Planning Committee. This he did. He asked State Senator Richard Moore and me to serve as co-chairmen. Governor Ellington has been extremely co-operative in the time, energy and effort he has given to this problem, and has had a conservative approach to the subject.

The state was divided into 7 districts, and in each district there was a meeting of all those interested in the problems of aging. Over 2000 people attended these conferences, from which came a statewide committee meeting of some 35 representatives to formulate information gained from the grass root levels. From this, came a book called *Tennessee Aging*, which contains an enormous amount of information, and which I recommend to you as a reference book regarding any problems of aging in Tennessee.

Finally, the Governor, through recommendations of our committee, appointed 36 delegates to the White House Conference on Aging. Included in the group were 3 physicians, including myself, and one dentist. This group almost in its entirety went to Washington in January of this year to the Conference.

Now comes the difficult part of this discussion, trying to impart to you some of the things that transpired in Washington. I can only give you my impression which may be correct or incorrect.

The story that you have all heard recently summarizes my impression of Washington, when it was said that "the way to get to Washington is to go to Harvard and turn left." However, what gives me concern is that even after getting to Washington one encounters only left turns. What concerns me even more is that for one to stay in Washington, one must keep turning left, and that the quickest way home for a legislator is to turn right.

At the opening of the Conference we were greeted by President Eisenhower. After the President had left Senator Pat McNamara, who is Chairman of the Senate Subcommittee on Aging, acted as host and welcomed the delegates. Senator McNamara immediately, and I thought uncouthly, charged the AMA with having rigged the conference and lambasted all who opposed

his views concerning the governmental social security plan of caring for the aged. George Meany, at one of the Group meetings, also did the same in even more radical terms. Apparently, Senator McNamara and Meany accomplished what they had hoped, which was to set the stage for undermining the Conference and for the furtherance of their own partisan interests. Not only that, they seemed intent on destroying the real purpose of the Conference, which was to objectively evaluate the problems of the aging; instead, it appeared they wished to throw the Conference into a political and economic battle ignoring all of the carefully prepared state reports and opinions. For instance, they knew that of 30 states reporting regarding the financing of medical care for the aged, only 10 favored the social security tax as a method.

Let me say that the AMA was as well-organized as possible, but certainly there was no rigging or stacking. Out of 2,600 delegates there were only some 125 physicians, definitely a minority group. And of these physicians a number were federal employees associated with certain agencies of government.

Following this first plenary session, the Conference was broken into 10 large groups, dealing with such problems of aging as:— (1) Population Trends, (2) Health and Medical Care, (3) Social Service, (4) Housing, (5) Education, (6) Recreation, (7) Role and Training of Professional Personnel, (8) Religion, (9) Research, and (10) Community Organization.

We learn there are 16,000,000 people over 65 years of age in the United States, two-thirds of these are over 70, one-third of these are over 75, with 8.6% of the total population being over 65. By 1970 there will be 22,000,000 over 65 years. In 1910, only one of 10 Americans reached the age of 65, now 2 out of 3 celebrate their 65th birthday. In 1900, the life expectancy was 48 years; it is now 69 years. In a few years the meeting of this Club will commonly include many healthy men between 90 and 100 years of age.

Time does not permit me to tell you of the various recommendations which came out of the groups at the Conference. Most of the recommendations were good and

realistic, and what you would expect from a common sense viewpoint. I might say that I mainly attended conferences on rehabilitation, which really were excellent and which convinced me of the great potential of rehabilitation programs of all types.

The only really controversial subjects, and the ones in which you would be interested, came out of the Sections on Medical Care and that on Income Maintenance.

The simple conclusions of the Section on Income Maintenance were: "We favor improvement of job opportunities for those who can and want to work, development of private pension plans and individual savings building on top of the social security system, and for those whose needs are not met through other methods an adequate system of public assistance." This group voted 170 to 99 for a social security approach. Whereas the Group on Health and Medical Care concluded: "Existing federal states matching programs will provide effective, economic, dignified, needed care for our elderly citizens, who actually need help. Compulsory health care inevitably results in poor quality care." This group voted 122 to 62 against a social security approach of financing the program.

Now, in the remaining few minutes, I would like to give you some of my personal observations and to quote some of the facts concerning the problems of aging which I have gained from my experiences.

The most outstanding impression I have of the whole problem of aging is that certain forces in America today, many of the so-called liberals, have cleverly seized upon the problems of aging for use as a tool, as a wedge or means to further the cause of socialism under the guise of humanitarianism. This I know to be true from my personal talks with their leaders. I would like to emphasize that it is with the leaders that we must be concerned, because many of the followers are conscientious dedicated people who really want to better the welfare of all people. I do not object to the right of one's belief concerning socialism, but I do object to the hypocrisy of exploiting the welfare of the aging as a means to gain these ends.

While I do not censure one's right to believe in the welfare state, I do believe we

should strongly consider the facts. This can be best done by quoting one paragraph from Senator B. Goldwater's book *Conscience of a Conservative*. I am sure most of you have read it; if not I strongly urge you to do so. To quote, "The effect of welfarism on freedom will be felt later on after its beneficiaries have become its victims, after dependence on government has turned into bondage, and it is too late to unlock the jail. But a far more important factor is welfarism's strong emotional appeal to many voters and the consequent temptation it presents the average politician. How easy it is to reach the voters with earnest pleadings for helping the needy and how difficult for conservatives to resist these demands without appearing callous and contemptuous of the plight of less fortunate citizens. Here perhaps is the best illustration of the failure of conservative demonstrations. I know, for I have often heard the questions the liberals ask, 'Have you no sense of social obligation?' 'Have you no concern for people out of work, for sick people who lack medical care, for children in overcrowded schools?' 'Are you unmoved by the problems of the aged and disabled?' 'Are you against human welfare?' The answers, of course, to all of these questions is NO. But a simple NO is not enough. I feel certain that conservatism is passe unless conservatives can demonstrate—and communicate the difference between being concerned with these problems on one hand and believing that the federal government is the proper agent to bring about their solution."

My next impression is that the problems of aging are being taken completely out of the hands of those who know the most about them.

Most physicians in this country decided to study medicine because they were interested in people, in their health and their welfare. Yet, their opinions are now not only being scoffed at and ridiculed but, paradoxically, are being completely perverted and used in a most derogatory manner, indicating to the public, and often accepted by the public, that doctors are only a selfish, self-centered, conniving, money-seeking group trying to do everything in their power to retard the health and welfare of

older citizens. This is what former President Truman said recently about the medical profession as an organization:—"They are against anything for the welfare and benefit of the people." He called us "mean and ornery," saying further, "I have no use for the AMA, the biggest trust in the world. They know how I feel, I'm not slandering them. They are for the benefit of themselves, that is all, just themselves." In last Sunday's paper an article by Drew Pearson was blazed in large headlines, "AMA Draws Battle Plan to Beat Aid for Aged." There is nothing farther from the truth. Here is what Robert Rourk says when lambasting the medical profession for opposing Kennedy's plan, "Doctors are human beings, and, while some are sinners and some are saints, the majority are just no good."

Yes, the leftist leaders are trying hard to distort and discredit physicians who, by and large, by virtue of their own desire, training, and action, have done more to improve the health and welfare of society than any other group. The liberals know this and believe the only way to accomplish their end is to tear down this image of the physician. In our society such is not only confined to physicians. How often do we hear remarks about the shyster lawyers, the philandering preachers, the heartless embezzling banker, the businessmen, Goldfine type; but let's be careful not to discredit business, labor, bankers, lawyers and ministers because of the few rotten individuals in their group.

Next, I believe the most outstanding impression I have gained about the whole problem of aging is the completely unrealistic manner in which it has been presented to the public. Here again this is being done by the welfare politician in an effort to capitalize on the humanitarianism aspect of aging. Purposely they are painting a picture of all people over 65 as being an old, dependent, dreary, defunct, destitute, debilitated, despondent and deteriorated group of people who must be cared for physically, mentally, financially and in every other way. I see a few of my friends in this audience who are over 65 and who surely do not fall into any of these categories. Actually, the great majority of people over 65 are mature, healthy, happy, "alive," aggres-

sive, able, active, adaptable, ambitious—and neither seek nor want help from the government.

I would like to quote to you a few findings of a nationwide study of people over 65 conducted by James W. Wiggins and Helmut Schoeck, Professors at Emory University. The survey was conducted by 25 highly qualified research associates, most of whom are college and university professors of sociology and psychology. "Of the older persons contacted, 90% said they enjoyed good or fair health; 68% said they could pay for a medical emergency costing at least \$1,000 out of their own means. Half of the respondents reported income in excess of \$2,000 a year and one out of twenty reported more than \$10,000. Most of the aged reported a net worth of \$10,000. Sixty per cent did not think a new department of federal government could do something for them personally and the majority believe life was easier for them than their parents." In answer to the question, "Do you have any medical needs now that are not being taken care of?", 90% said, "No." The study concluded that the elderly, like others in our population, are not characteristically dependent, inadequate, ill or senile. It also concluded that since all resources are limited, whether they be of family, kin, private or governmental agencies, the recognition that the dependent and helpless among our aging population are also limited in numbers will permit the available resources to be applied judiciously and with a far greater benefit to society as the result. In other words, if we dilute our resources the truly needy person will not have adequate help and those who are not needy will get unnecessary and wasteful help.

Further, the study states, "Our hypothesis was that modern life is not as complicated and frustrating for the aging as is pictured in current social science literature." It points out that certainly there are segments of our population at all ages, including the elderly, that are dependent, inadequate, ill and unemployed. Of course, these must be taken care of.

This brings me to my fourth observation, as mentioned before, that physicians since time began have been solicitous of the welfare of all people, particularly the aged. In

spite of recent adverse publicity, the truth is that all doctors and the AMA are the first to see and recognize that there is definitely an unfortunate, though not relatively large, portion of our population over 65, who are ill, unwanted and destitute and who should and must be taken care of by society. Medicine is not on the defensive about this group. It is very much on the offensive in desiring and seeing to it that this group is cared for. It would surely appear without question that all people should be cared for in the following order. First, as the individual's responsibility, then the family's responsibility, then by private philanthropic agencies, as churches, etc., then by the local, city, county and state governments, and only, finally, by the Federal Government with resort to a type of aid as outlined in the Kerr-Mills Bill.

This, then, brings up my last point and the controversial issue that monopolized, at least, the headlines coming out of the White House Conference on Aging.

The burning question, should all people over 65 have all of their economic, medical or social problems taken care of and financed by the Federal Government under one of the various plans attached to the Social Security Program, as the Forand Bill or, more recently, the Kennedy proposal, or should we simply through government take care only of those people who are inadequate in taking care of themselves through some plan such as the already enacted Kerr-Mills Bill. To answer this, I will have to offer certain quotes for and against each proposal. First, let us consider the financing of such a proposal as the present one of President Kennedy. This, I get from an editorial recently published by the *Wall Street Journal*. His bill would be a social security financial plan for the health care of the aged and at the same time urging increased government spending for medical training and research, medical and dental school construction, child care and vocational rehabilitation. The Kennedy Program would extend health care to 14.2 million aged 65 or over receiving social security retirement benefits. I shall not go into all of the benefits connected with the program. He does not provide for any pay for the physicians' services in the home or

at the office. This feature is strategic to put the medical profession on the spot. If the medical profession cannot block enactment of the Kennedy plan it faces a choice between, (1) reversing its field and seeking coverage for doctors' fees, or (2) committing doctors to handle a large part of the Nation's aged without charge and with doctors taking on the enormous increased patient load either as members of a hospital staff, or as the holders of unpaid bills.

Mr. Kennedy would attempt to finance his plan as follows: Social security taxes now are 3% each per employee and employer, a total of 6 per cent. On January 1, 1963, the tax is slated to go to 3.5% for each, then the added tax of the health care plan would be another 0.5% or 3.75% and the levy is to be on a broader base moving from the \$4800 to the \$5000 base. In addition, Mr. Kennedy has already sent Congress a plan calling for several other liberalizations in the social security benefits which would be paid for by still another $\frac{1}{4}$ of 1% increase in social security taxes. This addition would make the employee pay a 3.875% tax and his boss another 3.875% or a \$387.50 tax on a \$5,000 salary—this, of course, is in addition to his income tax, sales tax, gas tax, property tax and numerous other taxes.

Kennedy's strong argument is that this is not socialized medicine. This is the same hypocritical argument of Reuther, Meany and Wilbur Cohen. (The latter is Kennedy's professor from Michigan, advisor to Kennedy on medical care and one of the drafters of the social security act, and a long time advocate of socialized medicine.) Yes, these men and others say it is not socialized medicine, but let us examine what the socialist party says about the subject. Surely if any group is qualified to judge whether something is socialistic or not it should be the Socialists themselves. Here is what the Socialists said in the December 1, 1960 issue of their paper, *New America*. "After the Forand bill is passed, this Nation will be provided with a mechanism for socialized medicine capable of indefinite expansion in every direction until it includes the entire population." The paper went on to say that labor is the biggest and most

articulate of the group favoring socialized medicine.

Time does not permit me to comment on how such a program will affect the health of individuals in producing malingerers and psychoneurotics. Nor will it permit me to discuss the devastating effect it will have in supplanting insurance programs, as compared to the Kerr-Mills Bill which supplements, not supplants, voluntary health insurance. It is interesting that in 1952, 33% of persons over 65 had health and hospital insurance, in 1953, 43%, and in 1960 that 72% had it, with 46% of the total population being covered.

There are 1,600,000 hospital beds in the Country and a conservative estimate is that 20% are occupied by those over age 65. There are, therefore, 320,000 older people in hospitals every day at a per diem cost of about \$29 per day, or at a total cost of roughly \$10,000,000 per day or \$3,650,000,000 annually,—*just for hospitalization alone*. Yet the proponents of the social security approach in the Kennedy plan say that the whole program will only cost 2 to 3 million dollars! Do you know that in 1953 the Government spent a billion dollars on people over 65 years and in 1960 it spent \$17,000,000,000 for the same group.

Neither do we have time to discuss the tragic inflationary effect as part of the Kennedy proposal.

Finally, the big argument the welfare proponents use is that the current argument is just a renewal of the old fight against the social security tax, saying that now everyone accepts it, believes in it, and that it is great. It seems to me that there is some similarity in social security and digitalis. Certainly there is no more life saving or better drug than this one when given in relative small and correct amounts, but when too much is administered there is no more potent drug in destroying the very life one sets out to save. I feel sure that in our economic and social way of life the handling of the problems of aging, as well as many of the other new frontiers, are warnings as sure as the extra heart beats, yellow spots before the eyes, the irritability of muscle, the nausea and vomiting and other signs indicating ominous, dangerous

and probably fatal overdosage of digitalis.

My final thought is that one should hold no ill will or condemn anyone who holds a different philosophy of life from one's own regarding religion or socio-economic problems. However, one should detest and fight with all one's power those bigots who are willing and are using the camouflage of humanitarianism in an attempt to destroy the confidence in, or the reputation and the image of the physician in a hypocritical and dishonest effort to promote their own philosophy of a way of life.

DEATHS

Dr. Frizzell Pride Hess, 82, Holly Grove, died May 30th at the Jackson-Madison County Hospital in Jackson.

Dr. J. D. Carlton, 80, Union City, died June 8th at the Obion County General Hospital.

Dr. R. W. Smith, Newport, died May 22nd at Newport.

PROGRAMS AND NEWS OF MEDICAL SOCIETIES

Chattanooga-Hamilton County Medical Society

The usual meeting in May was conducted on the 2nd of the month. It consisted of a dinner meeting sponsored by the Chattanooga Surgical Supply Company.

The meeting on June 6th consisted of the annual outing and barbecue, held at the Chattanooga Rod and Gun Club. Dr. John M. Higgason was Chairman of the Picnic Committee.

Greene County Medical Society

The regular monthly meeting of the Society was held at the Elks Club on June 5th. A dinner preceded the meeting. In the business meeting, Dr. C. D. Huffman was nominated to be the Medical Examiner for the county. Other business included the presentation of a letter from the TSMA President urging all county society members to participate in the Tennessee Plan. Several other business items were presented to the Society.

The scientific program was presented by

the Chairman, Dr. Cowles, who introduced Dr. Martin Bronson, Radiologist from Elizabethton. Dr. Bronson showed films from several cases and discussed radiologic findings in pulmonary edema in the intra-alveolar variety and of the extra-alveolar variety.

Memphis-Shelby County Medical Society

The Society conducted its regular monthly meeting on April 4th in the Institute of Pathology. In the business session, the President, Dr. Cannon, announced that the investment retirement program of the society now has participation of 32% of the members.

The scientific program consisted of the following: "Nephrocalcinosis" by Dr. Gordon Mathes; "The Anterior Approach to the Cervical Spine" by Dr. Marcus Stewart (in the absence of Dr. Stewart, the paper and films were introduced by Dr. Harold Boyd); "Blunt Trauma to Major Arteries" by Dr. Robert McBurney.

Roane County Medical Society

The society held its regular monthly meeting on June 27th in the Oak Ridge Hospital where the meeting was preceded by a dinner in the cafeteria. The scientific program consisted of a panel discussion on "How Good Is Routine Hematology" with talks and demonstrations given by Dr. Dan Beals, University of Tennessee Hospital, Knoxville; Dr. Alen Carabia, Oak Ridge Hospital; Dr. Wm. Nelson, Medical Division, ORINS; and Dr. Ralph Kniseley, Medical Division, ORINS.

Consolidated Medical Assembly of West Tennessee

The Consolidated Medical Assembly conducted its regular monthly meeting on June 6th in the New Southern Hotel. The meeting was preceded by a dinner. The scientific program was presented by two lecturers. They were Dr. R. A. Calandruccio of Campbell's Clinic, Memphis, whose subject was "Common Preventable Errors in Orthopedic Treatment," and Dr. William Marbut, Nashville, spoke on the subject "VA Outpatient Treatment Program."

NATIONAL NEWS

The Month in Washington (From the AMA Washington Office)

The American Medical Association supported the Kennedy Administration's proposal to provide \$750 million in matching funds for construction of medical, dental, public health and osteopathic schools.

In a letter to Sen. Lister Hill (D., Ala.), Chairman of the Senate Labor and Public Welfare Committee, Dr. F. J. L. Blasingame, Executive Vice President of the AMA, said:

"As an Association of 179,000 practicing physicians, we are vitally interested in maintaining the high quality of medical education in the United States because of its direct relationship to medical care. For over a century, the American Medical Association has been actively and effectively engaged in the improvement of medical education in the United States. It can now be said, with assurance, that medical education in this country is superior to that found anywhere else in the world. It is not a coincidence that the improved standards of medical care in the last half century saw the elimination of sub-standard medical schools and diploma mills which had been turning out graduates in large numbers. This improvement in medical education is the result of the vigorous efforts of this Association and other interested organizations.

"We strongly believe that increased attention must be given to the adequacy of physical facilities, the availability of qualified instructors and the availability of teaching material and patients for the clinical phases of medical education if high standards of medical education are to be maintained. Any attempt to increase the number of medical students without regard to these conditions will result in a lowering of the standard of medical education. We are of the firm conviction that increase in the physical facilities available for medical education should be given priority at this time over any other federal legislation in the field of medical education.

"We believe that there is need for assistance in the expansion, construction and

remodeling of the physical facilities of medical schools and, therefore, a one-time expenditure of federal funds on a matching basis, where maximum freedom of the school from federal control is assured, is justified."

The AMA opposed a provision that might encourage medical schools to expand too rapidly. Dr. Blasingame said: "It is quite possible that a forced increase in freshman enrollment would be detrimental to the quality of medical education."

The Association did not take a position on the provision of the Administration legislation that would provide federal scholarships to medical students. However, Dr. Blasingame described to the senate committee AMA's new medical scholarship and student loan programs.

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The General Accounting Office found the Defense Department's Medicare program being conducted generally "in a satisfactory manner," but recommended some changes designed to correct what it considered "important deficiencies."

The Army, which administers the program of medical care for dependents of members of the armed services, took steps to put into effect most of the recommendations of the GAO, which audits federal spending for Congress.

However, Medicare officials rejected a GAO proposal for a change in physician fees.

"Our review disclosed that physicians' claims for medical care are, in general, significantly higher in states where maximum fees are made known to physicians than in those states where maximum fees are not made known," the GAO reported. "We estimate that there is an additional cost of as much as \$3 million to \$4 million annually as a result of maximum fees, rather than normal fees, being charged in the states where fee schedules are distributed to the physicians."

The GAO recommended that lower fixed fee schedules be negotiated for states where a high percentage of physicians' claims are for maximum allowable fees, "subject to being raised only on the basis of clearly supported evidence of higher normal fees."

If lower fees cannot be negotiated, the GAO said, efforts should be made "to have the state medical society or other appropriate parties accept the responsibility for determining that physician claims are generally not in excess of their normal charges."

The GAO further recommended that "physicians be required to certify on each claim that the amount billed does not exceed the physician's normal fee for the medical care furnished."

The Army disagreed, saying that it believed "the present contracting concept is the most suitable to meet the requirements and is in the best interests of the government."

The AMA noted that it had held from the outset that "fixed fee schedules would result in a more expensive program than if physicians were permitted to charge their normal fees."

Fixed fee schedules call for some fees above some so-called normal fees and others below average fees, the AMA said, "physicians tend to 'balance out' by using fees listed in the fixed fee schedule."

During the first four years of the program, \$130 million was paid to civilian doctors and \$133 million to civilian hospitals for care of 1.1 million military dependents. Maternity cases accounted for about half the total.

Medicare has asked Congress for \$73.2 million for the fiscal year 1962 beginning this July 1. This is a \$6.9 million increase over Medicare's current budget. The increase is needed, Medicare said, because of more military dependents eligible for the program's benefits and increases in the costs of services.

Kefauver Bill

Sen. Estes Kefauver (D.-Tenn.) has proposed a controversial bill which would apply stiff new curbs on drug manufacturers. Briefly, his proposal would: (a) bring drug manufacturing under the anti-trust act; (b) reduce the exclusive patent rights on drugs from 17 to 3 years, with an additional 14 years under which the patent holder would have to grant unrestricted licenses to all qualified manufacturers; (c) broaden inspection procedures under the Food and

Drug Act; (d) allow the Secretary of HEW to name all drugs, and the official name would have to be prominently displayed on the container; and (e) require the Secretary of HEW to distribute to physicians and hospitals all information required in the packaging of the drug. Dr. Karl Bambach, executive vice-president and secretary of the Pharmaceutical Manufacturers Association, said Kefauver's proposed changes in the patent law would have a catastrophic effect on the drug industry and other fields based on research.

MEDICAL NEWS IN TENNESSEE

Army Citation Given Dr. John B. Youmans

On May 3, 1961, Dr. Youmans, Emeritus Professor of Medicine, and Former Dean, Vanderbilt University School of Medicine, received the highest award the Secretary of the Army is authorized to give to civilian employees, the decoration for Exceptional Civilian Service. This award consists of a gold medal, lapel rosette and citation certificate.

Presentation of the award was made in the office of The Surgeon General by Major General T. S. Hartford, M.C., acting, The Surgeon General, at a ceremony attended by many of Dr. Youmans' friends and former colleagues. The citation certificate was signed by the Secretary of the Army, Dr. Elvis J. Stahr, Jr. and read as follows:

"For exceptional performance of duty as Technical Director of Research, Army Medical Research and Development Command, from 1 September 1958 to 30 September 1960. His expert technical knowledge, diplomatic acumen and executive talents were demonstrated with outstanding effectiveness in guiding and directing the Army Medical Research Program. His internationally recognized accomplishments in the medical and scientific world have been invaluable contributions in the forward aggressive movement of the research effort, maintaining and in many areas, increasing the traditionally high standards of the Army Medical Service Research Program.

This reflects great credit upon himself and the United States Army."

Dr. Youmans, a member of the Nashville Academy of Medicine, and of TSMA, is presently Director of the Division of Scientific Activities of the American Medical Association.

Memphis Society Sponsors Legislative Conference

A legislative meeting, for the purpose of indoctrination and education of physicians and their wives in socialistic legislation was conducted on June 8th at the University Club.

Mr. Lee Anderson, Editor of the Chattanooga News-Free Press was the first speaker and his subject was "Modern Minute Men to Save America."

Dr. Ernest B. Howard, Assistant Executive Vice-President of the American Medical Association, spoke on the subject "Medicine Under Social Security."

Average Hospital Benefits in Tennessee

The Health Insurance Institute has released average figures on hospital coverage in the state. A distribution by state of basic averages in group health insurance policies shows the averages of daily hospital room-and-board benefits and maximum surgical benefits. In Tennessee, the average room-and-board benefit daily is \$12 and the average maximum surgical benefit is \$270.

State Medical Aid for Aged Started July 1

Tennessee's newly adopted program of medical care for the aged, patterned after the Kerr-Mills Act, went into effect on July 1. The program, which will be administered by the State Department of Public Welfare, was authorized by the 1961 Legislature. Seventy-five percent of the cost will be paid from federal funds, 20% from the state and 5% from the counties.

The cost of the program for its first year of operation is expected to be \$2,095,470. Several requirements must be met before applicants can participate in the program. They must be 65 years of age or over; they must be neither receiving public assistance under existing programs nor eligible for such assistance; they must be unable to pay

for necessary medical care under standards established by the State Welfare Department; hospital expenses for any single fiscal year must exceed \$100 and a practicing physician must certify the patient's need for hospitalization or drugs.

Drugs will be provided for diabetes or heart disease patients under the noninstitutional phase of the program. It will be required that an applicant's income totals no more than \$1,000 for single persons or \$1,500 in the case of married couples who seek aid. The same limits will be placed on personal property, including stocks or bonds, cash on hand or in a bank, cash value of insurance policies, postal savings or other items which might be converted into cash to pay for medical care.

This marks Tennessee's first program under the provisions of the Kerr-Mills Act passed by Congress last year although other phases of the act were begun earlier without the necessity of special legislation.

Moccasin Bend Mental Hospital Dedicated

The newest of the State's intensive treatment centers for the mentally ill, located in Chattanooga, was dedicated on May 26th. Dr. Harry C. Solomon, Commissioner of the Massachusetts State Department of Mental Health and past president of the American Psychiatric Association, was the principal speaker.

The facility is designed to serve an eighteen county area in lower middle and east Tennessee. A plaque was unveiled of Dr. Joseph W. Johnson, Jr., Chattanooga, for his efforts to get the new hospital located in the Chattanooga area.

Knoxville Society of Internal Medicine

Dr. James Culbertson, professor of medicine at the University of Tennessee College of Memphis, spoke at a meeting of the Knoxville Society of Internal Medicine. His address before the society concerned recent advances in determining the various causes of hypertension.

The Knoxville Society is an organization of regional specialists in internal medicine whose objectives are to promote high standards of practice in internal medicine in the community, to encourage postgraduate edu-

cation of the members, to encourage clinical research and to emphasize the importance of teaching and other academic pursuits in the practice of internal medicine.

Tennessee Heart Association

More than 200 physicians and laymen attended the Eighth Annual Meeting of the Tennessee Heart Association at Memphis on June 9-10. The meeting was conducted at the Peabody Hotel. Dr. Oglesby Paul, president of the American Heart Association, spoke at the scientific sessions for professional members only. Dr. Paul is clinical association professor of medicine in Chicago. Appearing with him was Dr. Kenneth Moser and Dr. Edward Adelson, both of Washington.

Vanderbilt University School of Medicine

A research project underway at Vanderbilt University may shed light on how cancer develops and spreads in the human body. The potentially far-reaching research is being carried out through observation of giant cell formations in tissue culture infected with measles virus. Dr. John B. Thomison, assistant professor of pathology states that the findings may provide valuable assistance in tearing down some of the mysteries surrounding that disease.

University of Tennessee College of Medicine

A portrait of Dr. L. W. Diggs, professor of medicine and chairman of the department of laboratories, was presented to the College of Medicine as a tribute to Dr. Diggs' thirty years of service to the College.

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Dr. Simon Rulin Bruesch, professor of anatomy, is UT's first Goodman Professor. Dr. Bruesch was recommended for the distinction by a committee of his colleagues.

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Dr. Robert G. Jordan, assistant professor of pediatrics in the Child Development Clinic of the University, has received a \$500 in-service training grant from the Southern Regional Education Board under its program in mental health training and research.

★

Dr. Roland H. Alden has been named

dean of the School of Biological Sciences of the University of Tennessee Medical Units. Dr. G. Gordon Robertson, professor of anatomy since 1952, will succeed Dr. Alden as chief of the division of anatomy.

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Dr. Lewis D. Anderson, assistant in orthopedic surgery, has been awarded \$9,947 by the National Institute of Health of the U. S. Public Health Service, for a study on fracture healing.

★

A postgraduate program in neurology was offered on May 17-18 at the Medical-Surgical Building. Guest faculty consisted of Dr. A. L. Sahs, professor and head of the department of neurology at the University of Iowa, Iowa City, and Dr. Bertram E. Sproffkin, clinical professor of neurology at Vanderbilt University School of Medicine in Nashville.

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Dr. William Hall Lee, a fellow in thoracic surgery at the University of California Medical Center in Los Angeles, has joined the College of Medicine as assistant professor of surgery, effective July 1.

Family Physician Day at Central State Hospital

On Thursday, May 18th, a group of 27 General Practitioners from all parts of Tennessee attended a postgraduate program in Psychiatry presented jointly by the Vanderbilt University School of Medicine and the Central State Hospital. Dr. Oscar S. Hauk, the Superintendent, gave the welcoming address.

The theme of the program was centered around the mentally ill patient who is ready to be discharged and the role of the family physician in his post hospital treatment. The program also presented the overall diagnostic and therapeutic activities of the hospital in relation to a newly admitted patient. These ranged from the preparation of the family and the patient for admission to a mental hospital presented by Dr. Joseph J. Baker, Commissioner of Mental Health, State of Tennessee, to planning for discharge discussed by Dr. Nat T. Winston, Jr., Superintendent of Moccasin Bend Psychiatric Hospital, Chattanooga.

The principal address was given by Dr. William F. Sheeley, Chief of the Education Project for the General Practitioner of the American Psychiatric Association. The title of Dr. Sheeley's presentation was "Going Home for Keeps" in which he emphasized the need for close collaboration between the State Hospital and the family physician. He stated that the family physician can do much to alleviate the family's and the patient's doubts about one another once the patient is discharged from the hospital. He can also do much to facilitate the comfortable transition for the patient in his return from hospital to home.

He also emphasized the increasing responsibility of the community for the provision of resources for the follow-up care of the discharged patient that will do much to solve the problem of readmission. He stated "the day is long past when the State (mental) hospital can be permitted to stand apart from the community . . . close collaboration between State hospital and other community activities becomes . . . more necessary."

An interesting aspect of the program was a resume of the role of the different professions in the evaluation of the patient and in his subsequent treatment while in the hospital. The director of adjunctive therapy, Mr. Wayne Nichols, described the numerous activities included in his area, such as Music Therapy, Occupational Therapy, recreation, and the recent acquisition through the Department of Vocational Rehabilitation of shops for training of patients in such vocations as shoe repair, office management, domestic science and wood work.

Dr. R. H. Kampmeier, Professor of Medicine at Vanderbilt and Medical Consultant to Central State Hospital outlined the most useful liaison relationship that exists between the Hospital and Vanderbilt in teaching and the practical management of major medical problems occurring within the population of the Hospital.

Such postgraduate programs as these are accepted by the Academy of General Practice for credit in their regular postgraduate requirements.

Memphis Surgical Society

Dr. Francis H. Cole has been elected

President of the Memphis Surgical Society at a recent meeting at the University Club. He succeeds Dr. C. Douglas Hawkes. Other new officers are Dr. L. Henning Mayfield, vice president, and Dr. Robert M. Miles, secretary-treasurer.

The program for the meeting consisted of a paper given by Dr. Lester Adelson, pathologist and chief deputy coroner of Cleveland, Ohio.

PERSONAL NEWS

Dr. L. M. Graves, Memphis, recently addressed the Memphis Zonta Club.

Dr. Freeman L. Rawson, Knoxville, has been named president-elect of the East Tennessee Heart Association.

Recently elected officers of the West Tennessee Heart Association include **Dr. R. David Taylor**, Dyersburg, and **Dr. Lamb B. Myhr**, Jackson. Dr. Myhr is president-elect. Elected to the Board of Directors was **Dr. W. B. Acree** of Ridgely.

Dr. E. P. Muncy, Jefferson City, has been elected chairman of the Board of the East Tennessee Heart Association.

Dr. Hugh W. Rule, Kingsport, has been elected to the Board of Mayor and Aldermen of Kingsport.

Two new doctors are preparing to open their office at Elizabethton. They are **Dr. C. J. Wells** and **Dr. George Farrow**. Both have completed tours of duty with the U. S. Air Force. They will practice general medicine and surgery.

Dr. Harold G. Sibold, Chattanooga, has been certified as a diplomate of the American Board of Anesthesiology.

Dr. Laurence Jones, Union City, is the new president of the West Tennessee Heart Association.

The Blount Memorial Hospital staff officers consist of the following: Chief of staff, **Dr. T. G. Proctor** who replaces **Dr. W. C. Crowder**; Vice-chief of staff, **Dr. C. B. Lequire**; re-elected secretary-treasurer, **Dr. C. B. Howard**; Chief of medicine, **Dr. W. C. Crowder**; Chief of surgery, **Dr. J. A. Yarborough**. **Dr. W. N. Dawson** was elected a member of the Credentials Committee, while **Dr. Oliver W. Agee** was appointed as a member of the medical and surgical audit committee. All of the physicians are from the Maryville-Alcoa area.

Dr. Joseph E. Acker, Knoxville, has succeeded to the presidency of the Tennessee Heart Association. **Dr. David McCallie**, Chattanooga, has been named president-elect.

Dr. Albert C. Broyles, Dayton, was recently given an appreciation banquet at Bryan College

in observance of his 50 years in the practice of medicine.

Dr. Albert S. Easley, Chattanooga, recently spoke on the subject "Diabetes" at the Health Institute.

Dr. Robert M. Foote, Nashville, has been elevated to fellowship in the American Psychiatric Association. **Dr. Bruce Walls**, Memphis, was also elevated to fellowship.

Dr. E. F. Chabot, Chattanooga, recently addressed the Civitan Club.

Dr. J. H. Bowen, Maryville, is moving to Bangkok, Thailand.

Dr. Louis A. Killeffer, Harriman, addressed the Harriman Rotary Club. His subject dealt with care for the aged under social security.

Dr. Frank H. Genella, Jr. announces the opening of his office for the practice of medicine in Oak Ridge.

Dr. Robert Banner has been elected president of the Appalachian Heart Chapter in Kingsport. Other officers elected include **Dr. Lyman Fulton**, president-elect; and **Dr. Ben Hall**, vice president.

Dr. John T. Mason, McMinnville, will serve the first six months of 1961-62 as president of the Middle Tennessee Medical Association. **Dr. R. C. Kash**, Lebanon, will serve as president for the last six months of the term. **Dr. Arnold Meirowsky**, Nashville, is the new secretary-treasurer of the Middle Tennessee Medical Association.

Dr. Louis Pascal, Jackson, recently addressed the District 5 Tennessee Society of X-ray Technicians.

Dr. Sam L. Raines, Memphis, has been re-elected secretary of the American Urological Association.

Dr. C. M. Clark, McMinnville, has won the acclaim of "Rotarian of the Year" by the McMinnville Rotary Club.

Dr. Samuel Riven, Nashville, recently addressed the Memphis Heart Association at the University Club.

Dr. Julian C. Lentz, Jr., Maryville, has been named to the executive committee of the East Tennessee Heart Association. **Dr. Frank London**, Knoxville, was elected president.

Dr. George William Farris, Chattanooga, has been certified as a diplomate of the American Board of Anesthesiology.

Dr. Jere W. Clark and **Dr. J. Hicks Corey, Jr.** recently participated in a radio-TV program entitled "Pediatric Nursing" over a Chattanooga station.

ing the diseases that felled the fighting forces of World War II is the subject of this new book. This is the sixteenth volume of the series, "Medical Department, U. S. Army, in World War II," and is devoted to communicable diseases "transmitted through contact or by unknown means."

The success of the Army's program for the prevention and control of disease is indicated by the remarkable decline in the ratio of deaths from disease to deaths from combat injuries. For every soldier killed in combat in the Spanish-American War, five died from disease; in World War I, one man succumbed to injuries for every one who became the victim of disease; and by World War II, the ratio had dropped to .07 to one.

In this new volume, the second of three to deal with communicable diseases, nearly 200 pages are devoted to the prevention and control of venereal diseases, with considerable emphasis upon the social problems encountered in the various theaters of war.

Other diseases covered include epidemic keratoconjunctivitis, hookworm, schistosomiasis, skin infections, trachoma, infectious mononucleosis, viral hepatitis, and a number of others not as frequently encountered.

Among the many eminent medical men who have contributed to this volume are Dr. Thomas B. Turner, Dean of the Medical Faculty and Professor of Microbiology at The Johns Hopkins University; Dr. Thomas G. Ward, Professor of Virology at the University of Notre Dame; and Dr. James A. Doull, Medical Director of the Leonard Wood Memorial and formerly Medical Director of the U. S. Public Health Service.

This book provides excellent reference material for medical students, physicians, epidemiologists, immunologists, venereal disease control officers, entomologists, parasitologists, malariologists, health officers and nurses, and sanitarians.

Kay and Conwell's Management of Fractures, Dislocations, and Sprains. By **H. Earle Consell, M.D.**, Associate Professor of Orthopedic Surgery, University of Alabama School of Medicine, and **Fred C. Reynolds, M.D.**, Professor of Orthopedic Surgery, Washington University School of Medicine, St. Louis. Seventh Edition, 1129 pages, 1227 illustrations. St. Louis: The C. V. Mosby Co., 1961, Price \$27.00.

Through the widespread acceptance and usage of the six previous editions of "Kay and Conwell" a great number of patients have been given the benefits of sound, conservative treatment for their injury. This is the sort of book which has frequently been kept in close reach, since it has maintained a clear organization, the advice given is direct and understandable, and a rather broad approach to trauma has been traditional.

In the Seventh Edition, new material appears on deceleration injuries, spinal disc involvement, intramedullary nail techniques, and a discussion of prosthetic replacement of the femoral head. Facial

BOOK REVIEW

Preventive Medicine in World War II. Vol. 5. Washington. Supt. of Documents, Government Printing Office. Price \$6.00.

In a fighting Army, even the mildest diseases can cause a steady erosion of manpower. The Army Medical Services, achievements in conquer-

injuries, anesthesia and injuries of the hand have been revised.

The new Seventh Edition of this text insures the continued value of this book, particularly for those who do not propose to undertake a full review of the literature in seeking a sound reference regarding the care of a specific patient.

ANNOUNCEMENTS

Southeastern Surgical Congress

The Southeastern Surgical Congress announces the prize scientific paper award contest eligible to residents of approved hospitals in the Southeastern States for the best scientific papers. Papers are due at the Congress office at 340 Boulevard, N.E., Atlanta 12, Georgia, before December 1, 1961.

Alabama Chapter AAGP

A postgraduate medical assembly with a Dixie accent and replete with Southern hospitality will be presented in Birmingham, July 12-14, by the Alabama Chapter, American Academy of General Practice. The meeting will be held in the Dinkler-Tutwiler Hotel.

The program consists of the following: Speakers and subjects—

- Dr. Maurice Scurry—"Strokes and Heart Attacks"
- Dr. Robert Yoe—"Medical Aspects of Cerebrovascular Disorders"
- Dr. W. Sterling Edwards—"Diagnosis and Management of Thrombopneumonia and its Sequelae"
- Dr. J. Garber Galbraith—"Surgical Aspects of Cerebrovascular Disorders"

Dr. Lloyd M. Nyhus—"Inguinal Hernia Repair by Pre-Peritoneal Approach"

Dr. Thomas F. Frist—"Thoracic Disc Syndrome"

Dr. Harry C. Shirkey—"Medical and Surgical Aspects of Poisoning in Children"

Dr. Philip Thorek—"The Pancreas and The Practitioner"

Dr. J. W. Crookshank—"The Lumbar Spine and The Workman"

Dr. Neill K. Weaver—"The Cardiac in Industry"

Dr. Robert B. Greenblatt—"The Surgical and Endocrine Management of Endometriosis"

Dr. Alton Ochsner—"Carcinoma of the Stomach"

Dr. Samuel V. Nadler—"The Use of Radioactive Iodine in Thyrotoxicosis"

Dr. George A. Constant—"Psychiatric Disorders in Teenagers"

Dr. James T. Grace—"Latest Developments in Cancer Research"

Dr. J. Elliott Scarborough—"Males and Melanomas"

Interstate Postgraduate Medical Association

The Interstate Postgraduate Medical Association will hold its annual scientific assembly at Cleveland, Ohio, November 13-16, 1961. Co-sponsor is the Ohio Academy of General Practice. Headquarters will be at the Statler-Hilton Hotel.

Physicians Recently Licensed in Tennessee

- Wells, Charles J., Sumter, S. C.
- Murray, Marion J., Jr., Richmond, Va.
- Kussy, James C., El Paso, Texas
- Ransom, Robert G., Jeffersonville, Ind.
- Massey, William R., Signal Mountain, Tenn.
- Bellenger, James F., Akron, Ohio

PLACEMENT SERVICE

The Placement Service of the Tennessee State Medical Association is designed to assist doctors and communities to get together. Further information and contacts to both physicians and communities are available from the Public Service Office, 112 Louise Avenue, Nashville 5, Tennessee.

Locations Wanted

A 26 year old single general practitioner desires to locate in middle or west Tennessee community of 5,000-10,000. Will consider clinical practice as well as assistant or associate. Graduate of University of Tennessee. Methodist. Tennessee license. Available August 1961. LW-386

A 28 year old married general practitioner desires to establish clinical, assistant or associate practice in east or middle Tennessee community of 30,000 or less. Graduate of University of Tennessee. Residency, with one year of surgery. Tennessee license. Available July 1961. LW-392

A 30 year old married physician would like to establish practice in internal medicine with assistant or associate in west or middle Tennessee community of 65,000 or over. Would also consider clinical practice. Catholic. Graduate University of Cincinnati. Certificate Part I, American Board of Internal Medicine. Available July 1961. LW-394

A 30 year old married physician would like clinical or associate general practice in east or middle Tennessee community of 15,000 or over. Tennessee license; residency; surgery training; Methodist. Graduate of University of Tennessee. Available July 1961. LW-398

A 32 year old married general practitioner with an interest in obstetrics, would like industrial, assistant, or associate practice in middle Tennessee community of 50,000 or over. Baptist. Graduate University of Louisville. Available immediately. LW-401

A 37 year old married general practitioner with training in thoracic surgery would like to establish practice in east Tennessee community 30,000 or over. Will consider group, clinical, assistant or associate practice. Graduate Yale University. Catholic. Extensive residency training. License applied for. Available immediately. LW-402

A 37 year old married physician would like to establish clinical, assistant or associate practice in radiology in east Tennessee community 40,000-100,000. General diagnostic and therapy and isotopes training. Board certified Radiology Approved Isotopes. Residency training. Presbyterian. Graduate University of Tennessee. Available July 1961. LW-407

A 31 year old married physician would like assistant, associate or solo practice in OB-GYN in Tennessee community 15,000 or over. Methodist. Graduate Ohio State University School of Medicine. Completed residency training. Available August 1961. LW-408

A 40 year old native Tennessean, who is just completing four years residency training in gen-

eral surgery, would like to return to practice in Tennessee with assistant or associate, in general practice with surgery. Will consider clinical or other practice. Prefers east or middle Tennessee community, any size. Methodist. Graduate University of Tennessee. Available August 1961. LW-412

Physicians Wanted

Physician in large middle Tennessee town desires associate general practitioner. Office space and equipment available. PW-130

A middle Tennessee community of approximately 1,000 in need of general practitioner. Office space available. Hospital privileges nearby. Good recreational area, and excellent location. PW-139

Small southeastern Tennessee community in need of general practitioner to replace retiring M.D. Hospital within 15 miles. Near large industrial area. Large local trade area and good location. PW-142

Physician in large middle Tennessee town desires associate or independent internist or general practitioner. Office space and equipment provided. PW-146

East Tennessee community with trade area of about 2,000 needs general practitioner to assist the one other doctor in community. Office space and equipment will be provided to suit physician. Forty bed hospital located in community. Excellent opportunity. PW-149

Internist in large west Tennessee town wishes to find associate to share modern air-conditioned office with complete diagnostic equipment. Adequate technical help. PW-150

Physician, with experience in general surgery and/or interest in OB, needed in middle Tennessee community of 8,000. Eighteen bed hospital. Will furnish office space, utilities and telephone. Age 30-45. Associate or assistant status. PW-158

Physician in middle Tennessee community over 15,000 would like physician, for practice in OB-GYN, either on salary plus percentage graduating into full partnership or associate practice. PW-161

East Tennessee community with trade area from three counties, located at the foot of the Great Smokies, in need of general practitioner (with interest in OB) to replace physician who is leaving for further training. Community support assured. Excellent opportunity for 'family type' physician. PW-162

Physician to serve as Medical Director, State Department of Public Welfare, in southeastern region. Located in the state capital, population approximately 300,000. Responsibilities: to plan and direct medical services to persons receiving public assistance under the Medical Assistance to the Aged Program. Adequate salary, group insurance, retirement benefits, regular working hours. Immediately. PW-164

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"Waking numbness"—numbness noted during the waking hours, often accompanied by some swelling of the hand and in a middle aged person especially, demands consideration of this syndrome. The pathogenesis of the condition is not clear but surgical treatment is definitive.

NUMBNESS OF THE HAND Tardy Median Palsy or Carpal Tunnel Syndrome*

BLAND W. CANNON, M.D.,† Memphis, Tenn.

Confronted with the patient whose chief complaint is numbness of the hand the physician should consider compression of the median nerve at the wrist as the probable cause. This syndrome of slow compression of the median nerve within the carpal tunnel, i.e., tardy median palsy or carpal tunnel syndrome, is well-established. Its onset is insidious in the middle-aged, and its progression gradual. Paresthesia or numbness is invariably the presenting and predominate complaint. Impairment of sensation over the cutaneous area innervated by the median nerve, with or without atrophy of the outer lateral aspect of the thenar eminence, is evident on examination. Percussion of the volar aspect of the wrist produces a shock-like pain in the hand. Prominent vasomotor disturbances usually resulting from most lesions of the median nerve are infrequent.

Relief of symptoms and recovery of nerve function are obtained by division of the transverse carpal ligament. At operation a fusiform neuroma or swelling of the nerve is noted just proximal to this constricting ligament.

Review of the Literature

Prior to 1945, this syndrome was obscure although isolated cases had been described. Several explanations were given by the dif-

ferent authors for the occurrence of the partial atrophy of the thenar eminence. Occupational trauma was the explanation offered by Hunt¹ and by Moersch.² Dorndoff³ mentioned toxic neuritis in women during or at about the time of menopause as a likely cause. A popular theory also was that of Wartenberg,⁴ who described partial thenar atrophy as resulting from the phylogenetic susceptibility of the thenar muscles. In 1945, Love and I^{5, 6} presented a series of 40 cases which fit a clinical syndrome which we termed tardy median palsy. Eleven of this series were treated surgically by division of the transverse carpal ligament. Five of these cases had x-ray evidence of old fractures at the wrist.

Of importance is the fact that in the remaining 6 there was *no* bony deformity of the wrist. At that time the cause for the compression of the nerve within the carpal tunnel in these 6 cases was not known.

Since 1945, the syndrome has gained popularity. An intriguing British publication was the report of 60 cases by Kremer and associates.⁷ All 60 cases were seen in a two year period. The cases were described as being *typical* of the acroparesthesia syndrome long attributed to neurovascular compression at the cervico-axillary junction. Forty of these cases were treated surgically by division of the transverse carpal ligament. All but three of the forty obtained immediate and lasting relief of their symptoms. The median nerve *appeared normal* in 37 cases, and in only 3 cases was

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†From the Department of Surgery, University of Tennessee School of Medicine, Memphis, Tenn.

the characteristic fusiform enlargement of the nerve present.

In more recent reports some authors have stressed importance of tenosynovitis as the cause for the median nerve compression. Lipscomb,⁸ in reporting 30 cases, definitely thought that all but 3 were due to tenosynovitis. However, pathologic support for this diagnosis was lacking. Microscopic changes of the synovia were described in such terms as "noninflammatory connective tissue," "fatty and fibrous tissue," "myxomatous changes," "moderate fibrosis," "slightly inflamed synovial tissue," "noninflammatory edematous synovial sheath." Only 4 patients of his series were proven to have rheumatoid tenosynovitis.

In the past few years, frequent reports indicate the widespread recognition of the carpal tunnel syndrome⁴—an entity unknown 15 years ago. Yet, a satisfactory explanation as to why the syndrome develops has not materialized.

Pathogenesis

The carpal tunnel is a stable anatomic structure formed by the carpal bones and their ligamentous interconnections. The greatest span of the ligamentous wall is the volar or transverse carpal ligament. Through the tunnel course the flexor tendons, their investing synovia, and the median nerve. The tunnel space is so limited by the osseoligamentous wall that any invagination of the wall (as with arthritis), or any increase in the mass within (as with tenosynovitis), will cause compression of the nerve and tendons. The proximal orifice of the tunnel is narrower than the distal exodus. The constriction thus is maximal in this proximal portion which is adjacent to the movable parts of the wrist. Any anatomic derangement of the wrist as could occur in a Colles' fracture might narrow the entrance of the canal.

Thus, these anatomic factors alone may serve to explain median nerve compression that occurs with systemic diseases or in association with bony deformities of the wrist.

Even when these factors are applied, failure to explain a large group of cases with bilateral median nerve compression is apparent. In these cases no bony abnormality about the wrist is present. No evidence of

systemic disease had been found. This entity has been labeled by some as spontaneous median nerve compression. We prefer the term "tardy median palsy," because many of its characteristics are similar to those of the well-established syndrome of tardy ulnar palsy, the etiology of which, in the absence of deformity about the elbow, likewise remains somewhat obscure.^{5, 6, 10}

Surgical Procedure

The procedure used for median nerve decompression is performed unilaterally, or bilaterally as indicated. Local anesthesia is preferable, and a tourniquet is used to assure an avascular field. A modified S-curve longitudinal incision over the volar surface of the wrist and heel of the hand was used initially. However, a small transverse incision in the distal crease of the wrist may allow sufficient exposure. The palmaris longus tendon is identified and cut. The underlying antibrachial fascia is the next structure encountered. Its division exposes the nerve entering the carpal tunnel. A small right angle retractor elevates the tissue overlying the carpal ligament. Complete division of the ligament, although easily effected, is not always necessary as the tunnel widens distally and compression of the nerve occurs principally in the proximal portion of the canal. A sufficient portion of the ligament should be cut to prevent compression of the nerve in either flexion or extension of the wrist. The nerve sheath is not opened unless the gross appearance of the nerve suggests the need for neurolysis.

Analysis and Discussion

We are including in this study 50 operations performed on 38 patients, not previously reported, all of whom presented a characteristic pattern of symptoms. These cases may be considered proven cases of compression of the median nerve at the wrist as relief of symptoms and varying degrees of nerve function recovery resulted from the surgical procedure described.

The waking numbness symptom complex was noted to be typical in these patients regardless of the various disease entities represented in this study such as arthritis, myxedema, acromegaly, bony deformity, gout, dermatomyositis, etc.

Likewise, the same characteristic of the syndrome were evident regardless of occupation, although occupation may correlate on occasion with the initiation of symptoms and with the side of involvement. The left hand of a right-handed guitar player is an example of the latter.

The most common occupation, of course, is that of housework since women suffer with this affliction five times oftener than men. Secretaries, waitresses, bakers, golfers, machinists, physicians, were also represented in this study.

These 38 patients, submitted to operation, comprise only about *one-sixth* of the patients seen in our office in the past ten years with the chief complaint of numbness of the hand. Although these patients exhibited the characteristic symptom complex of waking numbness, operation was not advised principally because there were no objective signs of nerve impairment on neurologic examination of the hand. Likewise, these patients demonstrated varying degrees of neurovascular compression about the cervico-axillary junction. This nonsurgical group of patients was instructed in a program of pectoral-postural exercises. The conscientious patient who followed the program gained relief from her symptoms.

It is not the purpose of this paper to give in detail the study of these nonsurgical cases, but rather to point out the syndrome of tardy median palsy, and to assess its cause as compression of the median nerve at the wrist. This syndrome is associated with intermittent nocturnal swelling of the hand, and may occur in various systemic diseases. The pathologic reports on specimens of synovium sent to the laboratory for analysis have been disappointing, as were those reported by Lipscomb. We hesitate to accept, therefore, tenosynovitis as the principal cause of the syndrome without pathologic support.

Moreover, we tend to associate the syndrome of vascular compression at the cervico-axillary junction with the development of compression of the median nerve at the wrist.

Until some further pathologic explanation presents itself in those cases of bilateral median nerve compression in the absence of any pathologic change of tissue in or about

the carpal tunnel, we must assume that this transitory swelling of the hand associated with vascular compression is a strong contender as an etiologic factor in the onset of carpal tunnel syndrome or tardy median palsy.

Orientation is advisable regarding the symptom complex termed "waking numbness" referred to in the above text. This entity was mentioned in neurologic texts some fifty-odd years ago.¹¹ Included with the complaint of morning numbness was local congestion or swelling and temporary weakness of the hand. The cause was obscure. Distinction was initially made between waking numbness and acroparesthesia; however, the latter became the all-inclusive term. Subsequently, such notables as F. M. R. Walshe and Wartenburg⁴ attributed acroparesthesia to neurovascular compression at the cervico-axillary junction.

Many syndromes of neurovascular compression have been described such as the scalenus anticus syndrome, the cervical rib syndrome, the hyperabduction syndrome, the pectoralis minor syndrome, the thoracic outlet syndrome, the pectoral postural syndrome and others. Any attempt to separate all of these into distinct entities would lead us on a confusing, uncertain and unwise course. With reference to our topic, it is sufficient that we accept the evidence that vascular compression at this pectoral location can produce symptoms.

The clinical history of the patients in our series almost invariably fits a clear and certain pattern. The afflicted patient on awakening notices paresthesia and numbness of the hand. Frequently, she is not able to confine this area to the median nerve distribution, and is not aware that the little finger and ulnar area of the hand is spared. This symptom of paresthesia may produce nocturnal discomfort to a degree sufficient to awaken the patient from sleep. Most of the patients are able to obtain some degree of relief, when awakened at night, by change in position of their upper extremities. Overlooked in previous studies has been the intermittent swelling of the hand which has accompanied the symptoms of paresthesia and numbness. The female patient in particular has described repeatedly a feeling of tightness, stiffness, or puffiness

of her hands in trying to explain her morning symptoms. Often, the patient has found it necessary to discard her rings because of increased tightness during this period of swelling. During the morning while resuming the normal daily use of the hands these symptoms gradually disappear.

A persistence of symptoms throughout the day, in spite of the routine of normal activity, is usually compatible with objective loss of median nerve function in the hand. This persistence of paresthesias and numbness, or the gradual onset of distressing pain, prompts the patient to seek relief. Surgical decompression of the median nerve at the wrist will afford relief of symptoms.

Summary

In summary, the syndrome produced by median nerve compression within the carpal tunnel is well-established. The symptom complex of waking numbness, so typical of this entity, is described. We have attached significance to the pectoral vascular compression syndromes as an etiologic factor in the genesis of tardy median palsy. The relief of symptoms can be assured by decompression of the median nerve through section of the transverse carpal ligament.

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Discussion

AUGUSTUS McCRAVEY, M.D. (Chattanooga): Dr. Cannon has presented a most interesting and practical discussion of a very common complaint. He was one of the first neurological surgeons to report the symptom complex of carpal tunnel syndrome which he has covered very completely in his discussion.

My remarks will be directed primarily to a differential diagnosis of some of the other causes of numbness of the hand.

Numbness of the hand is often a complaint of young women in emotional, unstable and tension states. The numbness is usually present with equal intensity in both hands and may be associated with perioral numbness and many other obvious tension complaints.

Peripheral neuritis may cause numbness of one hand but more often involves other limbs. Numbness is accompanied by severe pain and there are usually other symptoms of nutritional deficiencies or toxic agents. Tendon reflexes would be depressed or absent.

Probably the most common cause of numbness of the hand, after the fourth decade of life, is cerebral vascular insufficiency. This numbness may be transient or intermittent and it is also associated with motor weakness and tendon reflexes usually become hyperactive on the entire side involved.

Trauma of various types along any portion of the nerve root, brachial plexus or peripheral nerves, either traction or compression type, may result in numbness of the hands. The numbness will be selective and segmental depending on the location of the injury. Motor weakness with atrophy and depressed or absent tendon reflexes will be present.

Chronic compression as a cause of hand numbness may result from hypertrophic changes in the cervical spine and herniation of intervertebral disc substance. The numbness is segmental and often motor weakness and depressed tendon reflexes are present. In compression of the subclavian artery and brachial plexus by cervical rib and anterior scalenus muscle, the numbness is usually diffuse and there is other evidence of arterial occlusion as well as depression of tendon reflexes.

Tumors, both primary and metastatic in the region of the brachial plexus, may cause numbness of the hand but gross examination will readily detect tumor in this area.

Venous obstruction as a cause of numbness of the hand is rather rare but may occur by compression of the subclavian vein by an enlarged subclavian muscle or a tumor in the same area. The entire upper extremity shows venous enlargement with pain and weakness.

The treatment is very obvious once the correct diagnosis is made and the results are often very gratifying.

Both in Tennessee and the country at large there has recently been a reversal of the trend in improvement of the infant mortality rate. The reasons for this are not clear. Attempts at analysis clearly indicate the need for careful data to be provided by attending physicians upon the birth certificate.

Maternal and Perinatal Mortality Statistics in Tennessee for the Past Five Years*

R. H. HUTCHESON, M.D., W. B. FARRIS, M.D., and ANN DILLON, M.S.P.H.†
Nashville, Tenn.

Introduction

In the last few years, this country has seen a reversal of the downward trend of the infant mortality rate. Because this change in trend seemed to be occurring in almost all of the states, the Children's Bureau and the National Office of Vital Statistics have been studying the official death records in great detail.^{1, 2} The American Medical Association through its Committee on Maternal and Child Care has launched a comprehensive study of the problem through hospital records. At least one Tennessee hospital has volunteered to cooperate in this study.

The problem with respect to Tennessee has been studied for presentation to this group using information contained on the official birth and death certificates. The trend of maternal and infant mortality in Tennessee over the past 20 years compared with that for the United States will be shown, as well as detailed statistics regarding factors associated with such mortality during the five-year period 1955-1959. The data refer to residents of Tennessee and exclude deaths of nonresidents that occurred in our medical centers.

Births

For an adequate understanding of factors associated with maternal and perinatal mortality, some idea is needed of the major

component of the population base—that is, live births. There has been an increase in both the numbers of live births and the birth rate per 1,000 population among Tennesseans in the past 20 years. The year 1947 saw the highest birth rate on record for the white population of Tennessee, a rate of 27.0 per 1,000 population. The birth rate among the nonwhite population, however, continued to increase and reached its peak in 1956 with a rate of 34.7 per 1,000 population. Some of the increase in the birth rate since 1940 is the result of improved registration of births* but there has also been an actual increase in the birth rate, itself, during this period.

For the five years, 1955-1959, there was an average of 83,758 live births each year. The average birth rate for the nonwhite population of 34.1 per 1,000 population was 50% higher than the average white birth rate of 22.3 per 1,000, as shown in the table below.

	Average Live Births 1955-1959	Rate per 1,000 Population
Total	83,758	24.1
White	65,535	22.3
Nonwhite	18,223	34.1

Maternal Mortality

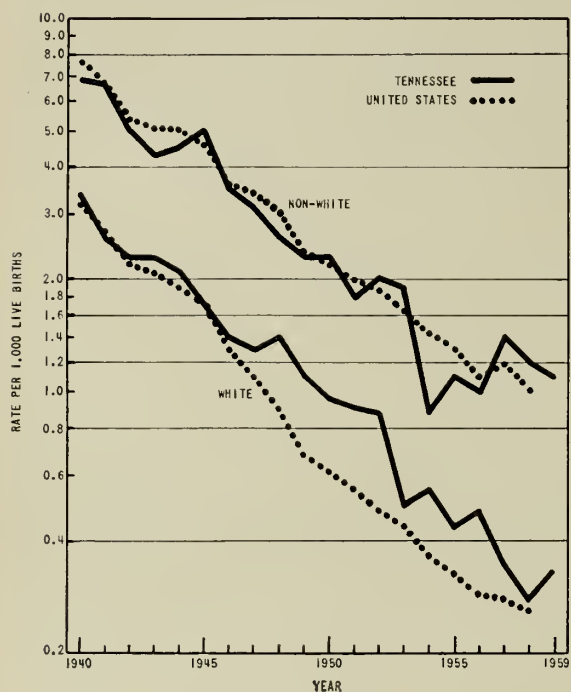
In spite of the increasing numbers of births during this period, there have been decreasing numbers of maternal deaths. The maternal death rate has declined since 1940 both for Tennessee and the United States—a 90% decline for the white population and 85% for the nonwhite population of Tennessee (Fig. 1).

*Presented at the meeting of the Tennessee State Obstetrical and Gynecological Society, April 10, 1961, at Chattanooga, Tenn.

†From the Tennessee Department of Public Health, Nashville, Tenn.

*In 1940 it is estimated that birth registration in Tennessee was 80% complete and in 1950, 97%.

FIGURE 1
MATERNAL MORTALITY RATE BY RACE AND BY YEAR,
UNITED STATES AND TENNESSEE, 1940-1959



The United States' and Tennessee's non-white maternal mortality rates are about the same. The Tennessee rate, however, moved upward after reaching a low point in 1954 while the United States rate continued to decline. The white rate for Tennessee has generally been higher than the white rate for the United States.

Tennessee averages 45 maternal deaths a year, 24 white and 21 nonwhite. The non-white rate per 1,000 live births is more than triple the white rate, as shown in the following table.

	Average Maternal Deaths 1955-1959	Rate per 1,000 Live Births
Total	45	0.54
White	24	0.37
Nonwhite	21	1.16

The causes of maternal deaths as stated on the death certificates have been tabulated and are shown in table 1 by race. Because of the small numbers involved on an annual basis, the total numbers of deaths for the five year period are given; the rates, however, are averages for a year. Toxemia was the most frequent cause given of maternal death and was followed in order by hemorrhage and sepsis. For each cause stated, the nonwhite rate per 1,000 live births was considerably higher than the white rate.

Reported Fetal Mortality

A fetus that shows no sign of life after complete expulsion or extraction from the mother, that is, does not breathe, has no heart action, and has no definite movement of the voluntary muscles, is considered a fetal death. If it shows any one of the above three signs, it is considered a live birth and is reported on a certificate of live birth. In Tennessee, all fetal deaths of 20 weeks or more of gestation are required to be reported.

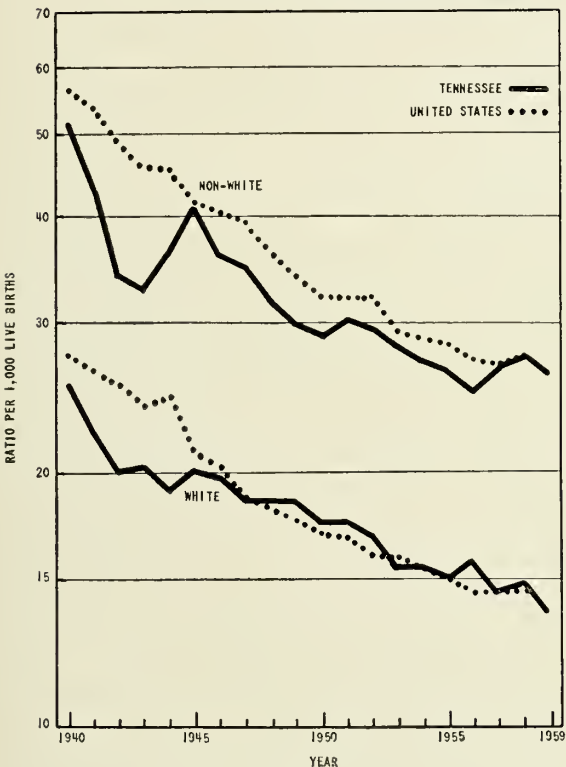
There has been a gradual drop in the fetal death ratio per 1,000 live births since 1940* for both Tennessee and the United States (Fig. 2). The white ratios for Tennessee

*Prior to 1945 the figures for the United States include all fetal deaths regardless of gestation; since 1945, only those of 20 weeks or more.

Table 1
MATERNAL DEATHS BY CAUSE WITH AVERAGE ANNUAL RATES PER 1,000
LIVE BIRTHS, BY RACE, TENNESSEE, 1955-1959

Cause of Death	Total Deaths			Average Annual Rate		
	Total	White	Nonwhite	Total	White	Nonwhite
Total	228	122	106	0.54	0.37	1.16
Toxemia	73	35	38	0.17	0.11	0.42
Hemorrhage	52	31	21	0.12	0.09	0.23
During pregnancy	7	5	2	0.02	0.02	0.02
Placenta praevia	17	12	5	0.04	0.04	0.05
Postpartum	28	14	14	0.07	0.04	0.15
Sepsis	43	25	18	0.10	0.08	0.20
With abortion	17	7	10	0.04	0.02	0.11
Phlebitis and thrombosis	4	3	1	0.01	0.01	0.01
Pulmonary embolism	12	9	3	0.03	0.03	0.03
Other sepsis	10	6	4	0.02	0.02	0.04
Ectopic pregnancy	10	4	6	0.02	0.01	0.07
Other and unspecified complications:						
Of pregnancy	11	5	6	0.03	0.02	0.07
Of delivery	32	18	14	0.08	0.05	0.15
Of puerperium	7	4	3	0.02	0.01	0.03

FIGURE 2
FETAL MORTALITY RATIO BY RACE AND BY YEAR,
UNITED STATES AND TENNESSEE, 1940-1959



and the United States are about the same. The Tennessee nonwhite ratios are lower than those for the United States, which indicates less complete reporting of these events in Tennessee. Tennessee's nonwhite ratio increased in 1957 to equal the United States ratio and the two remained the same in 1958.

Tennessee averages 1,441 fetal deaths a year, or 17 per 1,000 live births. The reported fetal death ratio for the nonwhite population is considerably higher than the white.

	Average Fetal Deaths 1955-1959	Ratio per 1,000 Live Births
Total	1,441	17.2
White	962	14.7
Nonwhite	479	26.2

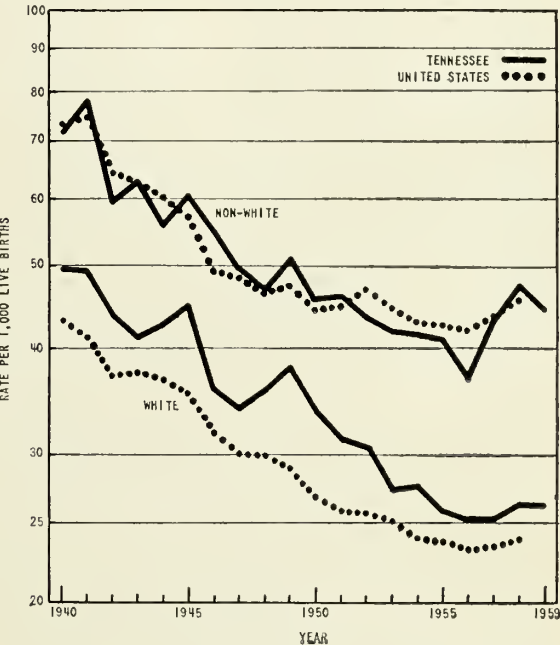
These are minimal figures since reporting of fetal deaths is probably less complete than that of live births.

Infant Mortality

Infant mortality, that is, deaths under one year of age per 1,000 live births, has declined in Tennessee as well as in the United States. In recent years there has been a slowing down of the rate of decline and

even an actual increase in the immediate past few years (Fig. 3).

FIGURE 3
INFANT MORTALITY RATE BY RACE AND BY YEAR,
UNITED STATES AND TENNESSEE, 1940-1959



There is very little difference between the nonwhite rates for Tennessee and the United States; the white rate for Tennessee has been consistently higher than that for the United States, however. The less favorable position of Tennessee with regard to availability of medical services compared with some of the more populous states may be one of the factors responsible for this difference.

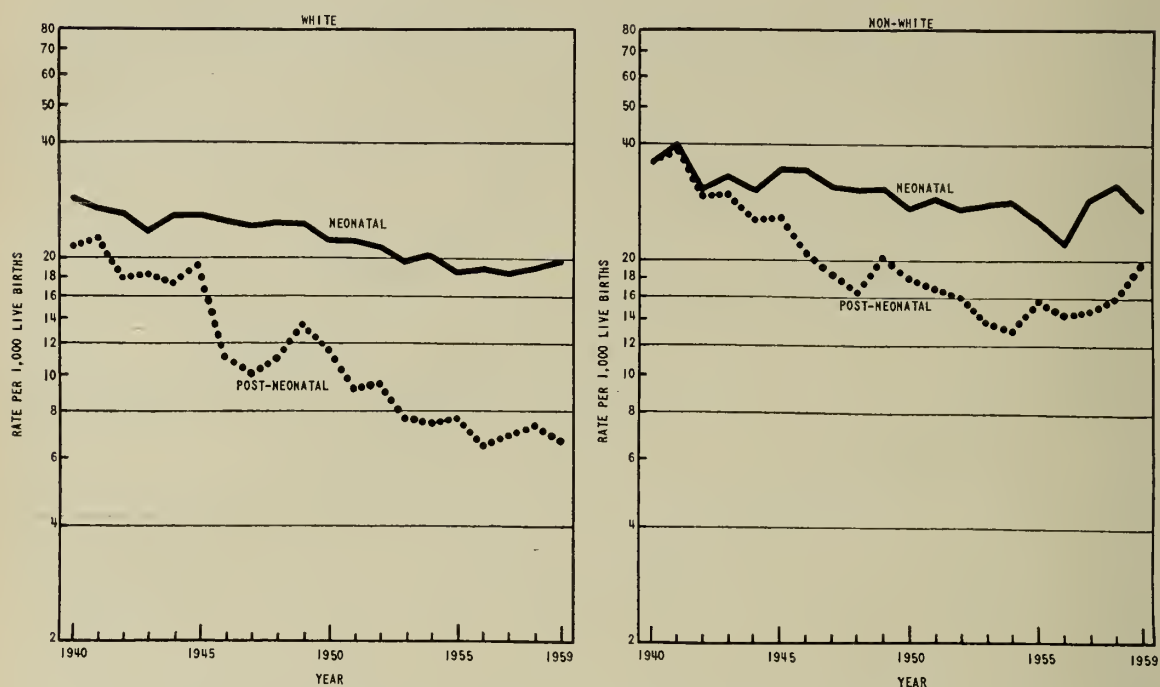
The downward trend of the infant mortality rate in Tennessee was halted in 1957 when the nonwhite rate rose sharply. The white rate showed an increase the following year, 1958. Both rates are still above the 1956 levels (previous low records). It is estimated that the final 1960 rate will be about the same as that for 1957.

White infants have a lower mortality than the nonwhite. For the five years 1955-1959, the average white infant death rate of 25.8 was 40% lower than the nonwhite rate of 42.5, as shown below.

	Average Infant Deaths 1955-1959	Rate per 1,000 Live Births
Total	2,464	29.4
White	1,689	25.8
Nonwhite	775	42.5

FIGURE 4

INFANT MORTALITY RATE ACCORDING TO NEONATAL AND POST-NEONATAL PERIODS,
BY RACE AND BY YEAR, TENNESSEE, 1940-1959



It is revealing to divide infant mortality into two age periods, those deaths occurring during the first 28 days of life, the neonatal period, and those occurring after the 28th day (Fig. 4). The decline in mortality has been much greater for the post-neonatal period than for the neonatal for both white and nonwhite infants. The increased mortality among white infants in the last few years was more marked in the neonatal period than in the postneonatal. Among nonwhite infants there was an upswing in mortality in both the neonatal and postneonatal periods.

Neonatal deaths constitute 73% of the white infant deaths and 63% of the nonwhite. Within the neonatal period mortality is concentrated in the first week of life. Thus, if the present level of infant mortality is to be reduced substantially, further progress in preventing death in the first few days of life is necessary.

Perinatal Mortality

Many times the distinction between a fetal death and a neonatal death is very slight. For this reason the study of perinatal mortality is recommended, that is, the

study of late fetal deaths and early neonatal deaths combined. For the presentation here, all fetal deaths with reported gestation periods of 20 or more weeks and neonatal deaths during the first week of life have been included.

Using this definition there were 1,441 late fetal deaths and 1,483 early neonatal deaths on the average each year among Tennessee residents to give a total of 2,924 deaths during the perinatal period. On a rate basis this corresponds to 34.3 perinatal deaths per 1,000 total births (live births plus fetal deaths of 20 weeks or more gestation). The nonwhite rate of 47.2 is 54% higher than the white rate of 30.7 per 1,000 births.

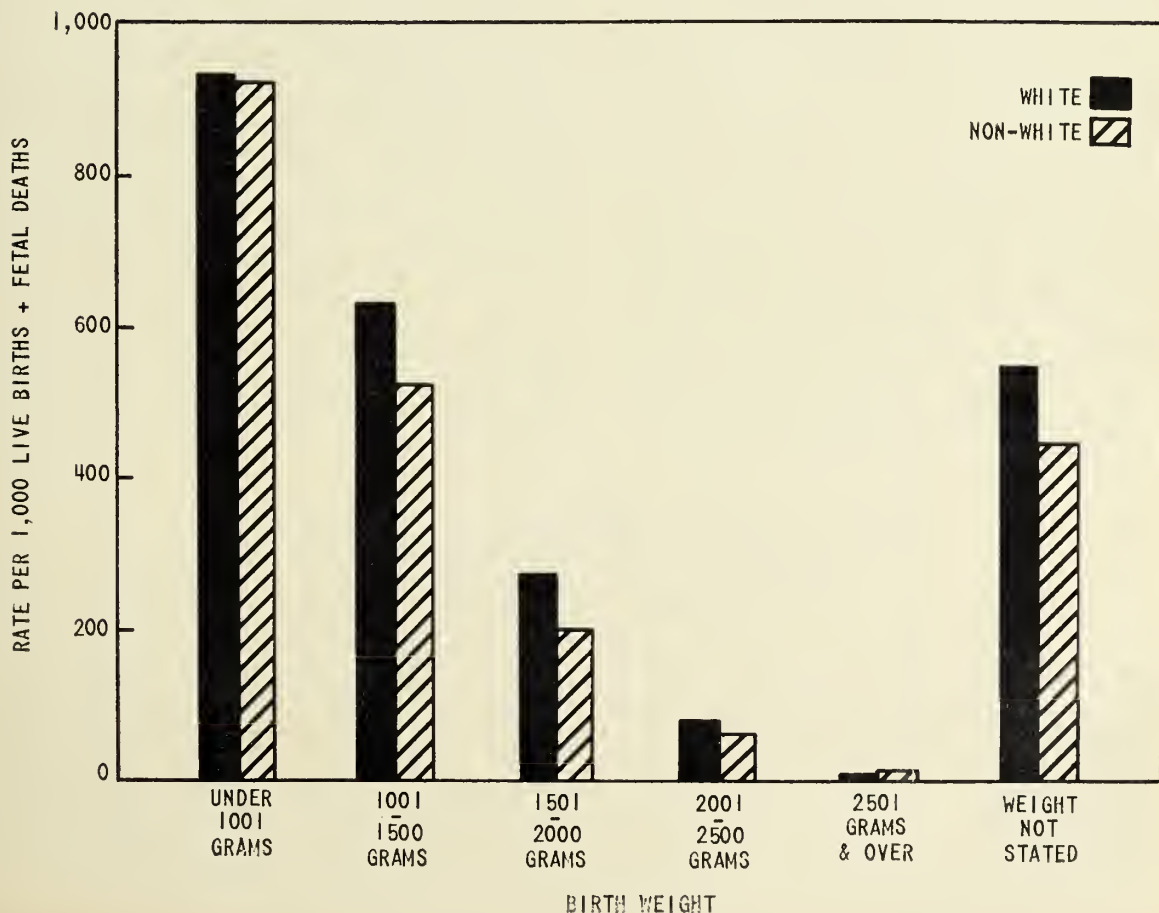
One of the outstanding factors influencing perinatal mortality is weight at the time of delivery. The very small infant has little chance of survival. As weight increases toward 2,501 grams, the generally accepted dividing line between immaturity and maturity, mortality decreases (Table 2 and Fig. 5). Infants weighing between 1,001 and 1,500 grams have a 36% lower mortality than infants weighing less than 1,001 grams at delivery. As birth weight increases by

Table 2
PERINATAL MORTALITY PER 1,000 LIVE BIRTHS AND FETAL DEATHS
ACCORDING TO TIME OF DEATH, BY BIRTH WEIGHT AND RACE,
TENNESSEE, AVERAGE ANNUAL DATA, 1955-1959

Race and Birth Weight	Live Births and Fetal Deaths		Total Perinatal Deaths		Fetal Deaths		Early Neonatal Deaths	
			Average	Rate	Average	Rate	Average	Rate
TOTAL	85,199		2,924	34.3	1,441	16.9	1,483	17.4
Under 1,001 Gm.	713		659	924.3	299	419.4	360	504.9
1,001-1,500 Gm.	714		423	592.4	148	207.3	275	385.2
1,501-2,000 Gm.	1,497		370	247.2	159	106.2	211	140.9
2,001-2,500 Gm.	4,799		363	75.6	185	38.5	178	37.1
2,501 Gm. and over	77,092		909	11.8	541	7.0	368	4.8
Not stated	384		200	520.8	109	283.9	91	237.0
WHITE	66,497		2,041	30.7	962	14.5	1,079	16.2
Under 1,001 Gm.	454		421	927.3	189	416.3	232	511.0
1,001-1,500 Gm.	458		288	628.8	92	200.9	196	427.9
1,501-2,000 Gm.	974		265	272.1	105	107.8	160	164.3
2,001-2,500 Gm.	3,218		262	81.4	123	38.2	139	43.2
2,501 Gm. and over	61,120		655	10.7	373	6.1	282	4.6
Not stated	273		150	549.5	80	293.0	70	256.4
NONWHITE	18,702		883	47.2	479	25.6	404	21.6
Under 1,001 Gm.	259		238	918.9	110	424.7	128	494.2
1,001-1,500 Gm.	256		135	527.3	56	218.8	79	308.6
1,501-2,000 Gm.	523		105	200.8	54	103.3	51	97.5
2,001-2,500 Gm.	1,581		101	63.9	62	39.2	39	24.7
2,501 Gm. and over	15,972		254	15.9	168	10.5	86	5.4
Not stated	111		50	450.5	29	261.3	21	189.2

FIGURE 5

PERINATAL MORTALITY BY BIRTH WEIGHT AND RACE,
TENNESSEE, 1955-1959



500 gram intervals, mortality decreases successively 58% and 69 per cent. And infants that reach maturity before delivery have an 84% lower mortality than even the largest immature group. Perinatal mortality among mature infants is only 11.8 per 1,000 total births.

Comparison of mortality by race within each weight group indicates that the non-white infant weighing less than 2,501 grams at delivery, and thereby considered immature by present definition, has a better chance for survival than the white infant of that weight group. For each of the weight groups under 2,501 grams, the non-white perinatal mortality is less than the white. The difference is more marked for infants weighing 1,501 to 2,500 grams than for those weighing less than 1,501 grams at delivery. On the other hand, mature non-white infants (those of 2,501 grams and over at delivery) have a much higher mortality than do white infants of that weight group (15.9 per 1,000 compared with 10.7 for the white).

The factors influencing these apparent differences in perinatal mortality of white and nonwhite infants are probably many and complex. The possibility of less complete registration for the nonwhite of all three components, births, fetal deaths, and neonatal deaths, is one to be considered. In fact, there is strong evidence that registration is incomplete for some of these events for both the white and the nonwhite population. For example, the early neonatal mortality of the smallest weight group, under 1,001 grams, probably should be close to 100 per cent. On the basis of stated birth weights, Tennessee records show less than 90% mortality for both racial groups.

Another factor involves the applicability of identical weight standards to the two racial groups. A higher proportion of non-white births is reported to be in each of the weight groups under 2,501 grams than is true of white births. In fact 13% of the nonwhite births are classed as immature on the basis of birth weight; whereas only 7% of the white births are in this category. It may be that the nonwhite infant of a given weight below 2,501 grams is more mature than a white infant of the same weight and thus has a better chance for survival.

The rates shown here by specific weight group are based on stated birth weights. Unfortunately, birth weight was not stated for 8% of the fetal deaths and for 6% of the early neonatal deaths. Probably most of these infants were in the low weight groups. Thus the rates shown here are lower than the actual facts. For accurate rates and valid comparisons the important item of birth weight should be completed on every certificate of fetal death and live birth, even if it has to be estimated.

The causes of death stated on the official certificates have been tabulated separately for the fetal deaths and the neonatal deaths. For 35% of the white and 46% of the non-white fetal deaths reported during the four years 1956-1959,* no specific cause was stated (Table 3). Placental and cord conditions were stated more frequently than any other specific condition as the underlying cause of fetal death. The white rate of 4.8

*Due to the revision of the medical portion of the fetal death certificates as of January 1, 1956, comparable data regarding causes of fetal deaths are available for only 4 years of the period under study.

Table 3
AVERAGE NUMBER OF FETAL DEATHS PER YEAR WITH RATE
PER 1,000 TOTAL BIRTHS AND PERCENTAGE DISTRIBUTION, BY CAUSE
OF DEATH AND BY RACE, TENNESSEE, 1956-1959

Cause of Fetal Death	White			Nonwhite		
	Average per Year	Rate per 1,000	Per Cent	Average per Year	Rate per 1,000	Per Cent
Total	959	14.5	100.0	480	25.6	99.9
Placental and cord conditions	320	4.8	33.4	124	6.6	25.8
Congenital malformations	88	1.3	9.2	14	0.8	3.0
Toxemias and other conditions of pregnancy	67	1.0	7.0	48	2.6	10.0
Difficult labor	64	1.0	6.7	32	1.7	6.7
Diseases of mother	36	0.5	3.8	28	1.5	5.8
Erythroblastosis	34	0.5	3.5	3	0.1	0.6
External causes	8	0.1	0.8	5	0.3	1.0
Birth injury	5	0.1	0.5	5	0.3	1.0
Other and ill-defined causes	337	5.1	35.1	221	11.8	46.0

per 1,000 total births and the nonwhite rate of 6.6 for these conditions were much higher than the rates for other specific causes. Among the white infants, congenital malformations were the second most frequent cause given. However, this rate of 1.3 per 1,000 was less than one-third of that for placental and cord conditions. Toxemias and other conditions of pregnancy ranked third and difficult labor fourth among the specific causes of white fetal deaths. Erythroblastosis foetalis was stated as the cause of an average of 34 white fetal deaths a year.

Among the nonwhite fetal deaths, toxemias and other conditions of pregnancy, with a rate of 2.6 per 1,000, ranked next to placental and cord conditions (rate of 6.6 per 1,000). Difficult labor ranked third with a rate of 1.7 and diseases of the mother fourth with a rate of 1.5 per 1,000.

Among the total neonatal deaths,* immaturity, *per se*, was stated as the cause of death more frequently than any other condition (Table 4). For the white neonatal deaths, the average rate for immaturity was 5.1 per 1,000 live births and for the nonwhite the rate was 10.4. This difference in the white and nonwhite rates reflect the higher percentage of births in the weight groups under 2,501 grams among the nonwhite population (13% for the nonwhite compared with 7% for the white). The risk of death among these weight groups, however, is slightly less for the nonwhite infant

than for the white, as shown previously (Table 2 and Fig. 5). Asphyxia and atelectasis is the second and most frequent cause stated for both white and nonwhite infants, with respective rates of 4.1 and 3.9 per 1,000 live births. Among white infants, congenital malformations ranked third with a rate of 2.5 and birth injury fourth with a rate of 2.2 per 1,000. Among the nonwhite group, infections of the newborn, such as umbilical sepsis, pneumonia of the newborn, diarrhea of the newborn, etc., ranked third with a rate of 2.5 and birth injury ranked fourth with a rate of 2.3. Erythroblastosis foetalis was stated as the cause of 33 white neonatal deaths a year and of only 5 nonwhite deaths.

Summary and Conclusions

Great progress has been made in the reduction of infant mortality in Tennessee as well as in the country. Today, the problem is concentrated in the early neonatal period. Failure to reach mature birth weight before delivery is one of the major factors affecting the frequency of fetal death and also of death during the first few days of life.

Tennessee experienced an increase in infant mortality in 1957, similar to that for the country as a whole. Studies are needed to understand the causes behind this increase and to make further progress in reduction of fetal death and neonatal mortality. From official vital records we can analyze mortality by age of mother, birth order, legitimacy, place of birth, etc., in addition to the factors presented here. For studies of outcome related to prenatal care, complications of pregnancy and of delivery, special studies such as those recommended by the American Medical Association Committee on Maternal and Child Care are needed.

Table 4
AVERAGE NUMBER OF NEONATAL DEATHS PER YEAR WITH RATE
PER 1,000 LIVE BIRTHS AND PERCENTAGE DISTRIBUTION, BY CAUSE
OF DEATH AND BY RACE, TENNESSEE, 1955-1959

Cause of Neonatal Death	White			Nonwhite		
	Average per Year	Rate per 1,000	Per Cent	Average per Year	Rate per 1,000	Per Cent
Total	1,227	18.7	100.0	490	26.9	100.0
Immaturity	334	5.1	27.2	189	10.4	38.6
Asphyxia and atelectasis	270	4.1	22.0	71	3.9	14.5
Congenital malformations	166	2.5	13.5	29	1.6	5.9
Birth injury	147	2.2	12.0	41	2.3	8.4
Infections of newborn	65	1.0	5.3	45	2.5	9.2
Erythroblastosis	33	0.5	2.7	5	0.3	1.0
Other diseases of early infancy	108	1.7	8.8	35	1.9	7.1
Other causes	104	1.6	8.5	75	4.1	15.3

*Tabulations by cause of death were not available at the time of this writing for the early neonatal deaths separately from the entire neonatal group. However, the data presented are considered valid for the early neonatal deaths since that group comprises more than 80% of the total neonatal deaths.

For both types of studies, complete and accurate records are necessary. The attending physician has a responsibility to provide this information so that accurate statistics may be available.

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2. Hunt, E. P. and Chenoweth, A. D.: Recent Trends in Infant Mortality in the United States, Am. J. Pub. Health 51:190, 1961.

Relationship Between Arterial Pressure and Exertional Angina Pectoris in Hypertensive Patients.

By A. J. Georgopoulos, F. M. Sones, Jr. and Irvine Page. *Circulation* 23:892, 1961.

This article discusses one in a series of observations on angina and exercise tolerance. Previous observations have suggested that an elevated arterial pressure may accompany clinical bouts of angina. Clinicians have frequently noted and occasionally reported the relief of exertional angina in hypertensive patients by adequate control of their arterial pressure. Conversely, too great a lowering of tension in hypertensives is known to produce anginal pain.

In 7 hypertensive patients suffering from exertional angina pectoris, coronary arteriography revealed segmental arterial disease in 5 and a normal vascular tree in the remainder. All had left ventricular hypertrophy but no myocardial infarction by history or electrocardiogram.

The 5 patients with segmental arterial disease were studied prior to the institution of antihypertensive therapy. They were asked to perform a specified amount of exercise in a sitting position and in a supine position. Exercise was of course discontinued at the onset of any anginal pain. Four of the 5 patients had anginal pain forcing an end to exercise and all 5 had pressor responses averaging 60 mm. Hg. systolic and 33 mm. Hg. diastolic in the supine position and roughly half as much response in the sitting position. Abnormal electrocardiograms were noted in all of the subjects. More pronounced and longer lasting clinical symptoms and electrocardiographic changes were noted in the supine group which had shown the greater pressor response. Subsequently the

pressor response of these subjects was blocked with an intravenous sodium nitroprusside drip and the exercise repeated in the supine position. Neither symptoms or signs of angina appeared.

The 2 treated patients studied had orthostatic hypotension secondary to their therapy. Exercise in these 2 individuals in the sitting position produced hypotension (average fall 122/86 to 80/55), and clinical symptoms as well as electrocardiographic signs of angina. Supine exercise which was unaccompanied by pressure changes was without signs or symptoms of angina.

Two of the 5 hypertensives were tested following control of their hypertension with oral guanethidine. Exercise failed to raise their pressure or to produce angina. In the 2 patients with normal coronaries who experienced angina during hypotensive periods brought on by erect exercise neither signs nor symptoms of angina were produced by either lowering or raising pressure in the supine position with drugs.

The authors postulate that the lessening of cardiac work by the lowering of pressure is responsible for preventing angina. They could not correlate the anginal symptoms with the cardiac rate. They also state, from evidence gained at coronary arteriography, that sodium nitroprusside is not a coronary vasodilator and hence does not act by this route. In the patients with orthostatic hypotension the pressure fall was felt to be associated with poor perfusion of the vasculature bed. The "straight gate and narrow path" for the hypertensive patient with angina is more clearly defined. (Abstracted for the Middle Tennessee Heart Association by Stephen Schillig, M.D., Nashville.)

STAFF CONFERENCE

University of Tennessee

College of Medicine*

Salmonella Enteritis

DR. HARRY BLUMENFELD: *Present Illness.* J.B., a 37 year old colored man, was admitted on Jan. 31, 1961. At the time of admission he was unable to give a history, and the story was obtained from a niece who was not considered to be too reliable. Subsequent to the patient's recovery a more complete and reliable history was obtained. Initially the history consisted of the following: The patient was apparently well until one week prior to admission when he went on an alcoholic "binge" drinking "moonshine" which was supposedly corn liquor. Two days before admission he began to have a small amount of rectal bleeding but denied any pain, and the following day had fever and chills and remained in bed. Three hours prior to admission, while lying in bed, he complained of lower abdominal pain and felt that he could obtain relief by having a bowel movement. He thought that he did have a bowel movement, but his niece noted a large amount of dark red and bright red blood passed per rectum. He was immediately brought to the Emergency Room. The patient vomited one time the day of admission but no gross blood or "coffee ground" material was noted.

Review of systems failed to reveal any other evidence of organic disease. The patient had never had any previous episodes of rectal bleeding nor any symptoms referable to the gastrointestinal system.

Past history. Five years ago in Chicago the patient had an abdominal operation following an automobile accident and/or knife wound. (The niece stated it was an automobile accident and a brother stated it was for a knife wound.)

Physical examination. This revealed a well-nourished, well-developed Negro in peripheral vascular shock, lying in an estimated 1000 cc. of dark red and bright red blood with active rectal bleeding. The patient was disoriented and delirious. Pulse was 120 and regular, blood pressure 80/60, temperature 102.4°. (Hematocrit was 25% in Emergency Room.) Examination of the heart revealed only sinus tachycardia, and the lungs were clear to auscultation and percussion. Examination of the abdomen revealed an old vertical midline 6 inch scar extending from the xiphisternal notch caudally. The abdomen was distended and tympanitic. Bowel sounds were active and normal. There was moderate voluntary muscle guarding with diffuse minimal tenderness. No rebound tenderness was elicited. No organs or masses were palpable. Rectal examination re-

vealed no masses but a large amount of bright red blood was obtained on rectal glove. Examination of the genitalia failed to reveal any testicular atrophy. No gynecomastia was noted nor any spider angiomas seen.

Laboratory Data. Admission laboratory work showed a hematocrit of 25, WBC. count 6,850 with 2 bands, 65 segmented neutrophils, 26 lymphocytes and 7 monocytes. The patient was immediately typed and crossmatched for blood replacement and infusions of dextran were started in the interim. A nasogastric tube was inserted and only clear fluid and mucus were obtained on continuous suction. A BSP. test revealed 10% retention at 45 minutes, BUN. was 24, chlorides 105, and CO₂ of 15.

Course in Hospital. Surgical consultation was obtained and both the medical and surgical house officers thought the patient probably had a bleeding postbulbar peptic ulcer with rapid gastrointestinal transit. The possibility of bleeding Meckel's diverticulum or lower gastrointestinal lesion was considered. Three hours after admission (9 p.m.) the patient began to respond to questions and stated that for the past 3 weeks he had been having postprandial and night epigastric pain relieved by milk and soda. Re-examination at this time revealed coarse rales at both lung bases, more pronounced on the right. Chest film and K.U.B. studies were nonrevealing. At 10:00 p.m. (4 hours after admission) the patient had received 4 units of dextran and 1500 cc. of whole blood. The blood pressure rose to 120/80. The patient was still actively bleeding per rectum at this time, and his hematocrit was 23. Sigmoidoscopy to 17 cm. revealed only large amounts of red blood with normal-looking mucosa. By 4:00 a.m. the following morning (10 hours after admission) the patient had received a total of 3500 cc. of blood, was still actively bleeding by rectum and had a blood pressure of 90/60 and a pulse of 120. His hematocrit at this time was 20; urinary output was 40 cc. per hr. It was apparent at this time that blood replacement was not keeping up with the patient's bleeding, and it was decided to take him to surgery.

The patient was operated on at 7:30 a.m., Feb. 1, 1961, 13½ hours after admission. At operation the terminal ileum and cecum were involved with multiple patchy inflammatory lesions and many enlarged lymph nodes; it was thought at the time of operation that he had represented regional enteritis, but typhoid fever was mentioned as a possibility. The terminal four feet of ileum and cecum were resected and an end-to-side anastomosis performed. Unfortunately the resected specimen was sent directly to the Pathologist and no culture was obtained. Following operation the patient was given chloramphenicol because of an unprepared bowel prior to operation. Later in the morning the medical and surgical residents discussed the case and typhoid fever was considered a strong possibility. Later that morning the gross pathologic report revealed the lesion to be consistent with typhoid fever. The patient was

*From the Division of Medicine, University of Tennessee College of Medicine, Memphis, Tenn.

taken off Chloromycetin, blood cultures were drawn, stool and urine cultures collected and blood for febrile agglutinations drawn. The next day the patient spiked a temperature of 103°, and was started again on chloramphenicol; also on the day after operation the surgical resident obtained the following history from the patient's wife.

Patient, wife, and three children, ages, 3, 2, and 9 months, and grandmother have been living on Rt. #1, Eads, Tenn. Water supply there is an open well with bucket and winch. The well is in the back yard, 15 to 20 ft. from kitchen door. The outdoor toilet is at the opposite side of back yard at two or three times the distance of the well from house; the ground is essentially level in this area.

The grandmother was hospitalized here about 3 years ago with febrile illness. The patient apparently was well until the time he left for work Friday, Jan. 20, 1961, except that he told his wife he had passed a tea-cup full of blood with stool during the week before. He failed to meet his wife that afternoon (11 days before admission) and returned home on Jan. 25, (6 days before admission), telling his wife he had been in jail. He talked somewhat "out of his head," was anorexic, thirsty, had hard shaking chills and some diarrhea. After 2 days the chills and fever became continuous throughout the day, and he became more delirious. Subsequently he was brought to relatives in Memphis the day prior to admission, and apparently did not pass any blood per rectum that was noticed until shortly before being brought to the Emergency Room.

Subsequent laboratory work revealed the following:

- (1) Sputum culture revealed *Staph. aureus*, coagulase positive.
- (2) One blood culture yielded *Salmonella*, group B.
- (3) There were no enteric pathogens in the stool specimen.
- (4) No growth was found in the urine culture.

Febrile agglutinations on Feb. 2 was negative for typhoid; on Feb. 7 it was typhoid positive complete at 1:80; blood drawn on Feb. 15 has not been reported yet.

Patient was treated with chloramphenicol, responded well and was discharged on Feb. 16, 17 days after admission.

DR. I. FRANK TULLIS: Dr. Hyman, will you present the radiologic studies?

DR. ORREN W. HYMAN, JR.: A supine chest film dated Feb. 1 reveals a slight increase in lung markings in the right mid-lung field consistent with a minimal inflammatory process. No consolidation of pneumonia is demonstrated. The heart and mediastinal structures are within normal limits. A Levine tube is seen passed through the esophagus.

A plain abdominal film dated Feb. 1 reveals some gas filled loops of small and

large bowel without signs of an ileus, however. These would be consistent with an enteritis, no masses are delineated. The K.U.B. tract is obscured.

DR. TULLIS: Dr. Williams, would you give us more details about the findings on this patient at surgery?

DR. OLIN WILLIAMS: We did not really know what to expect when we operated on this man. After opening his abdomen, we inspected his upper gastrointestinal tract. There were a number of old adhesions present. There was no evidence of blood in the gastrointestinal tract in its upper portion. The stomach appeared to be perfectly normal as did the duodenum. In inspecting the small bowel, beginning at about its mid-portion, there was evidence of old blood within the lumen of the bowel. However, the small bowel remained normal in appearance until the terminal 3 feet of ileum was inspected. Beginning in this proximal portion there were discrete oval to circular lesions which were primarily on the anti-mesenteric border. Some of these appeared quite thin and close to perforation, with areas of hemorrhage in the bowel wall. Others were thickened to palpation and had a yellowish-tan color in contrast to the surrounding bowel. These varied in size from about 0.5 to 1.5 cm. in diameter. As the cecum was more closely approached, these became much more profuse and in the terminal 4 to 5 inches of the ileum, they became confluent. We did not really know what this represented and the staff consultant was not absolutely sure either. We discussed the possibilities of regional ileitis and typhoid fever. It was not typical of regional ileitis, however. There was this discrete involvement with apparently uninvolved bowel in between. The mesentery was not shortened. There was no evidence of old inflammatory disease. We felt very confident, however, that this was the area from which he was bleeding massively. His cecum was resected along with the terminal ileum because the involvement of the ileum extended immediately adjacent to the cecum and resection of the ileum with end-to-end ileostomy could not be accomplished without doing this through involved bowel.

DR. JAMES CULBERTSON: Was there any fluid in the peritoneal sac?

DR. WILLIAMS: There was a small amount of pink-tinged fluid, 50 to 75 cc. Not much more fluid than one would expect to see in almost anyone but there was a little blood-tinge to it.

DR. TULLIS: Are there any other questions?

DR. CULBERTSON: Did the patient show a relative bradycardia?

DR. BLUMENFELD: He did not.

DR. CULBERTSON: In uncomplicated typhoid fever, patients do usually have a relative bradycardia. This patient was bleeding actively, which would tend to elevate the pulse rate and therefore would obscure this differential diagnostic sign.

DR. BLUMENFELD: His pulse remained rapid throughout the course, Dr. Culbertson. He remained febrile until approximately the second day after operation.

DR. CULBERTSON: What was his pulse rate when he had this high fever just after the operation? You said he had a temperature of 103° or so.

DR. BLUMENFELD: The temperature was 102.8° when he came in, and 103° the second day. His pulse was running about 120 and remained elevated before operation.

DR. WILLIAMS: I believe this patient demonstrated relative bradycardia from about his 3rd to 5th postoperative days, when he still had a low grade fever, but his pulse rate had fallen to about 60 per minute, which is significantly less than is usually seen during this postoperative period.

Incidentally, the discontinuance of chloramphenicol was more of an exercise on the order sheet than an actual lapse in therapy, as it was again begun less than twelve hours later.

The spleen was not inspected or palpated at operation because of the adhesions in that area.

DR. TULLIS: Dr. Cheek, could you show us the surgical-pathologic findings?

DR. WILLIAM S. CHEEK: The resected specimen is the terminal of 153 cm. of ileum in continuity with the distal 7 cm of cecum and the appendix. The ileal lumen contains clotted blood. Twenty-eight raised, discrete, tan and red ulcerative lesions averaging 1.5 by 2.5 cm. occupy the positions of Peyer patches and there is one 1.5 cm. ulcer of the cecum. Intervening mucosa is

grossly normal. The serosa is thickened and gray overlying the lesions. The most distal ileal ulcer is quite deep, appearing to have penetrated the muscularis. The appendix is grossly normal. Ileal mesenteric lymph nodes are enlarged, soft up to 2 x 2 cm., and on section have multiple foci of necrosis.

Microscopically, the lesions of the ileum consist of extensive surface necrosis with severe underlying inflammatory reaction, predominately mononuclear infiltrate with some erythrophagocytosis, extending through the muscularis and serosa. Vasculitis is prominent with some vessels being thrombotic. Section of the deep ulcer mentioned previously reveals the ulcer base to consist of serosa only. No microscopic changes of intervening areas of ileal mucosa or the appendix are noted. Lymph nodes contain multiple stellate areas of hemorrhagic necrosis with marked lymphoid hyperplasia and prominent infiltration of large mononuclear cells.

In summary, the pathologic changes are indistinguishable from those of typhoid fever. It would appear that one of the ileal lesions was quite near perforation.

DR. TULLIS: Thank you Dr. Cheek. Dr. Bicks will open the discussion of this case.

DR. RICHARD O. BICKS: There has been a great deal of interest lately in *Salmonella* infections and I am not going to steal the thunder of the epidemiologists. With the establishment of two centers in this country for typing these organisms and availability of such tests, one is finding a wide spectrum of previously unsuspected disease. Most of the clinical classifications of *Salmonella* infections fall into three broad areas which overlap. There is the acute gastroenteritis which is probably the most common. The second grouping is of the septicemias with focal abscesses which has been the area of most interest recently. These are characterized by the particular organism *Sal. choleraesuis* as it has been implicated in osteomyelitis as well as localized formation of mycotic aneurysms. Finally, there is the syndrome of enteric typhoid fever.

In this day and age we do not think of typhoid fever often enough. With modern sanitation and attention to the amenities of life, like washing one's hands and the fall-

ing into disrepute of outside toilets, typhoid fever even in the rural South, is probably a rare disease.

In looking over the literature on the typhoid fever group of syndromes, all the articles I read pointed out that the difference between typhoid and paratyphoid fever was a matter of degree apparently and less of a matter of a sharp clinical distinction. This was more of a serologic diagnosis made in retrospect than by pointing to a number of clinical manifestations as characteristic either of *Salmonella B* or *D* infection. In retrospect one looks for rose spots but such areas of skin change over the abdomen would be notoriously difficult to see in the Negro.

When seen initially neither rose spots nor splenomegaly were noted in our patient. As was pointed out, the discrepancy between temperature and pulse is probably negated by the presence of bleeding into the gut and impending perforation.

When one looks backward, when one has the material presented in your hand as a pathologic specimen, it is very easy to be critical and dogmatic. Today you were presented with a problem of a man with fever, with massive exsanguinating hemorrhage and displaying characteristics which usually in this hospital are of upper gastrointestinal bleeding, either ulcer or varices. I think they satisfactorily ruled this out by the simple maneuver of using a gastric lavage tube and testing the material aspirated for blood. Being negative in the face of severe exsanguinating hemorrhage, this is fairly good evidence that the bleeding point is distal to the ligament of Treitz. Practically all patients having the dysentery-typhoid syndrome have positive guaic tests on their stools during the course of enteric fever. This is due to the well known changes of bleeding and hemorrhage in the Peyer's patches of the terminal ileum. Roughly 10 to 20% of the group have fairly massive bleeding, requiring blood transfusions and treatment for shock, again on the basis of presumably the same pathologic change. A very small percentage in the older literature have exsanguinating hemorrhages. This is a rather rare complication, particularly of paratyphoid infection in 1961. The residents attempted to replace blood vol-

ume and then used blood transfusion. Recognizing that things were not progressing well the patient had a laparotomy. I think there should probably have been no question in their mind as far as regional enteritis. Most specimens of regional enteritis that one sees show a diffuse cobblestone lesion of the terminal ileum, occasionally with involvement of the right colon and with skip areas in the ileum and mesenteric adenopathy. The description of the operative lesion grossly was not regional enteritis. Surgical intervention seemed mandatory. The only question I would raise about the management was the intermittent usage of chloramphenicol. Once the diagnosis is established one is committed to such therapy for a prolonged period. This in 1961 is a rare disease. I leave it to the epidemiologist to tell us how rare. I believe we see a large number of instances of so-called "intestinal flu" in practice which are ascribed to enteric viruses but maybe one of the minor *Salmonella* subtype diarrheas which clear up with a little supportive therapy. None of us have made the effort to check serologic titers so that this is just conjectural. The differential diagnosis lies between pneumonia because of the chest findings, Rocky Mountain spotted fever, murine typhus and some of the rarer infectious diseases which in everyday practice one never really thinks of until we are at the end of the diagnostic trail. I expect the next time we get a patient in with *Salmonella* enteritis and bleeding we probably will not think of the diagnosis either.

DR. TULLIS: Dr. Rendtorff will continue the discussion.

DR. ROBERT C. RENDTORFF: "One of the most cunning organisms to contest our right to this world is the numerous species called *Salmonella*, a highly diverse and uniformly treacherous group. It is responsible for many cases of so-called food poisoning; it has devised novel modes of transmission; it has insinuated itself into tube feedings; it has caused postoperative diarrhea, masquerading as 'disturbed physiology,' following abdominal surgery; and it continually develops new characteristics to defy recognition." I don't know who wrote these words but I thought they were quite apropos for the beginning of a discussion on the epide-

mology Salmonellosis. What I have to say today is taken primarily from two articles appearing in the New England Journal of Medicine in 1957. One of them by McCready and co-workers is on Salmonella in Massachusetts and represents 16 years experience with the infection; the other one by Saphra and Winter is on the clinical manifestations in man and evaluates some 7,779 cases. These works represent a massive volume of material.

To begin with let's talk a moment about the taxonomy of this group. There are now, I suppose, 500 or so serotypes. The vogue is to name these after the location in which one finds them. A few are named after persons and a few after animals. They are grouped according to the somatic "O" antigen, and they are typed within these groups on the basis of the flagellar, the "H" antigen. Ninety-eight per cent of strains in these surveys fell into the first five groups, that is, Group A through E. Ninety per cent of all infections were among 11 types including *Sal typhi*, typhoid fever. In spite of the large number of strains, all but 2 in a 1000 can be identified with as few as a dozen well-chosen typing serums. So you see, in spite of this tremendous number of types, it is practical to choose your typing serum carefully and miss very, very few. This is very important, I think, as far as laboratory diagnosis is concerned. *Salmonella typhimurium* apparently is the commonest one in the United States and the commonest in other countries. The particular one which is commonest depends on where you are. But here *Sal. typhimurium* is by far the most frequent. In this country, as has already been said, typhoid fever is on the decline. If one looks at charts of death rates and cases, one finds that typhoid fever is still going down. However, either something is happening in the manner of *Salmonella* or we are having better reporting. I think as a matter of fact both are true. Salmonellosis is definitely on the increase.

Salmonellosis has a definite seasonal distribution. It is present the year around, though there is a peak in August, at least in the East Coast. August through September or October is the high season and February is the low season. As far as the age distribution is concerned, one in five are in in-

fantants under one year of age and one-third of all cases are in the first decade of life. So it appears to be a childhood disease. As far as sex distribution is concerned; *Salmonella typhi* affects approximately 50-50 male and female. *Choleraesuis*, however, has a peculiar predominance for the male showing ratios as high as 2 to 1 to 3 to 1 of males that are affected over females. As for clinical features, 70% of *Salmonella* infections are gastroenteritis with diarrhea. Six to nine per cent are of the type we have seen here today—typhoidal or septicemic. Of most importance I think is that 16 to 22% of isolates are asymptomatic. The carrier state, in other words, is very common but fortunately, I suppose, it is relatively short in *Salmonella* and this distinguishes it from the typhoid carriers. *Salmonella* infections are very rarely persistent infections. Very few persist over a year's time. As you know, the infections which do persist in typhoid may persist for practically the life of the individual.

It is futile, apparently, to attempt to clear the carrier state with antibiotics. As a matter of fact it may be somewhat dangerous to attempt to do this because one might produce resistant strains. The case fatality rate of *Salmonella* other than *Sal. typhi* was in these surveys from about 1.5 to 4 per cent. *Sal. choleraesuis* showed the highest case fatality rate, 16 to 20 per cent. Apparently this is quite a dangerous organism. It is a little bit strange that some of the organisms such as paratyphoid B, where the symptoms are typhoidal and septicemic, as we saw in the patient presented, the case fatality rate is very low, only 1 per cent. *Choleraesuis* then is the most dangerous, *typhimurium* the commonest of these infections.

The natural habitat is the intestinal tract of man and animals. Apparently in the case of typhoid fever it takes very few organisms to produce the infection; therefore, we see this disease frequently transmitted by contaminated water supply where relatively few organisms are ingested. In most of the *Salmonellas* apparently it takes a relatively large dose compared to *Sal. typhi* so we see such things as food stuffs becoming of great importance here. As a matter of fact, it is the increase perhaps in our methods of handling food today, our in-

creasing catering service, the increase in frozen foods, TV dinners, etc., that we are so apt to buy in the grocery stores that in part may be causing an increase in the disease, at least I look at it this way. There are certain food products that are particularly difficult to handle; pork is one, turkey and duck eggs are notorious means of transmission of the organism. In the Massachusetts outbreaks they had 11 clear-cut epidemics that were attributed to the following foods: lemon meringue pie, snow pudding, baked beans, (undoubtedly Boston baked beans), chopped liver, egg yolk powder (infant food that is, and I am sure you all remember that this is why some of the commercial processors of infant food had to recall their products from the market), sliced watermelon, cod fish cakes and brewers yeast which was tube-fed to patients in the hospital.

They did some experiments on watermelon and from these experiments showed that a clean melon which was sliced with a contaminated knife bearing the organism was dangerous. They showed that the clean knife can carry the organism on the surface of the melon through the interior and they showed that watermelons offer good means for growth.

Control is extremely important. These authors universally caution about the use of antibiotics. This will not, as I have said before, reduce the carrier state and it may cause resistant organism. What is more important I think, is that it may destroy the normal flora of the intestinal tract and there is some belief that these organisms protect against the pathogen. This is a very novel idea and I wish I had more to tell you about it. I do not know the exact experimental basis for this but it would be an interesting idea to pursue. The normal fauna and flora are actually protecting here against parasites. We need better methods in control of food inspection. Public health officials worry about this today and they are doing things about it.

I want to say one final thing. The standard TAB vaccine, that is, typhoid with paratyphoid A and B, typhoid belonging to group D, so it is a ABD vaccine, does not produce immunity against *Salmonella* of the C group which contains some of the

most dangerous organisms such as *Sal. choleraesuis* and many others. So it is recommended that we study these strains very carefully and perhaps we are going to have to modify our vaccines in order to get a better product.

DR. TULLIS: Thank you Dr. Rendtorff. Dr. Womack, will you give us any additional thoughts you have on this subject?

DR. C. RAY WOMACK: One should emphasize the fact, brought out previously, that we deal in salmonellosis not only with a tremendously large group of organisms, but also with a spectrum of disease that varies from extreme severity on the one hand to mild or unrecognized subclinical infection on the other. The problem is simplified somewhat because, out of this great number of organisms, there are a certain few associated more frequently with significant clinical disease than others.

It is not uncommon for the initial or onset symptoms in typhoid fever and in other salmonella infections to be predominantly respiratory in nature. Commonly the sign and symptoms are those of a bronchitis accompanied by cough and pulmonary rales, as this patient presented. Furthermore, during the bacteremic phase of the disease, localization in the lungs and active salmonella bronchopneumonia, with organisms recoverable from the sputum, is not extremely unusual. Insofar as pathogenesis is concerned, we usually consider the entry of these organisms into the tissues or blood to occur by way of the lower small intestine. *Sal. typhosa* organisms grow in lymphoid tissue and tend to localize in the lymphoid tissue of Peyer's patches. As suggested a number of years ago without direct proof, they may also infect the lymphoid tissue of the pharynx, gaining entry into the tonsils or lymphoid follicles and draining through lymphatic channels to mediastinal lymph nodes. Resulting inflammatory changes in the bronchi and surrounding tissues have been offered as an explanation of the early bronchial symptoms. The idea has to be considered a speculative one, since there are no sound data to support it.

I have no comment about the clinical diagnosis of this particular patient. At the time I saw him I was prejudiced by information about the surgical specimen and

other laboratory findings. I believe, however, that this case is an unusual one. In typhoid fever gross intestinal hemorrhage is an uncommon phenomenon, occurring no oftener than in about 5% of cases. Furthermore, the great decline in incidence of typhoid over the past several decades has further reduced our opportunity of observing hemorrhage as a complication. Enteric or typhoidal fevers caused by salmonellae other than *Sal. typhosa* are well recognized. It is generally believed that gastrointestinal hemorrhage occurs even less frequently in this group. In a paper by Ivan Saphra of New York reporting over 3,000 cases of salmonellosis there were about 175 fatalities (Am. J. M. Sc. 220:74, 1950). There were no deaths in this series from gastrointestinal hemorrhage.

Three clinical phenomena in salmonellosis deserve re-emphasis. One is the peculiar association of salmonella septicemia with infection and rupture of arteriosclerotic abdominal aortic aneurysms, an unexplained phenomenon. Another is the association of salmonella osteomyelitis with sickle cell hemoglobin diseases. The third is the pneumonic localization, already discussed, that occasionally occurs in salmonellosis.

As to treatment, an ideal therapeutic

agent for salmonellosis is yet to be discovered. Chloramphenicol, the most useful antibiotic generally available for this purpose, is not an entirely satisfactory drug, particularly from the standpoint of clearing the carrier state. I have had no experience with Synnematin B, which was developed by the Michigan State Health Department and has been difficult to obtain for various reasons. It has been used in the treatment of typhoid fever (J.A.M.A. 57:989, 1955), but has by no means replaced chloramphenicol as the therapeutic agent of choice. It is well to remember that the use of aspirin as an antipyretic in typhoid fever may cause profound lowering of blood pressure and vascular collapse.

The therapeutic use of typhoid vaccine has perhaps been recommended more strongly by some British physicians than by those in this country. Some believe that most or all patients with typhoid fever should be given vaccine. Some recommend ordinary commercially available triple vaccine; others a vaccine made from the organism recovered from the patient. Data are insufficient for drawing any sound conclusions.

DR. TULLIS: Thank you Dr. Womack. This completes our conference for today.

A Study of Pulmonary Embolism. Gorham, L. W.: Arch. Int. Med. 108:8, 1961

Because no condition is less often diagnosed correctly than massive pulmonary embolism, Gorham has presented a clinicopathologic investigation of 100 cases of massive pulmonary embolism, and has stressed that there should be an increase in diagnostic accuracy by a systematic examination of the patient for specific physical signs. The differential diagnosis from acute myocardial infarction and from acute cerebral vascular accident should be made by a careful examination.

Although the onset of symptoms in all but 5 of the 100 patients was sudden, with marked disturbance in respiration accompanied by pallor and/or cyanosis, cardiac pain (19%) and hypotension, myocardial infarction was misdiagnosed 20 times, and cerebral vascular accident was misdiagnosed 5 times. The supposedly 4 common cardinal diagnostic clues, (pleural pain, bloody sputum, pleural

friction, and clinical evidence of phlebitis) were noted antemortem in only 46.5% of the cases.

A list of 12 physical signs, one or more of which may result from obstructions of the pulmonary artery or to main branches are presented: (1) pulsation in the second left interspace; (2) accentuated P₂; (3) pseudopleuropericardial friction are produced by distention of the pulmonary artery; (4) systolic murmur in second left interspace; (5) diastolic murmur in same location; (6) interscapular bruit; (7) unilateral expansion lag with diminished breath sounds, and produced by the embolus itself; (8) increased cardiac dullness to the right; (9) distended neck veins; (10) gallop rhythm; and (11) enlarged liver are produced by the associated pulmonary hypertension. (12) "Die rote Blut Welle," (the red arterial wave of blood) over the pallid face is produced by the movement of the embolus. (Abstracted for the Middle Tennessee Heart Association, by C. W. Adams, M.D., Nashville.)

CLINICOPATHOLOGIC CONFERENCE

Veterans Administration Hospital* Hepatoma with Erythrocythemia

C. Eastridge, M.D. and H. Bernhardt, M.D.

Present Illness. This 54 year old white man was transferred to this hospital from another V.A. hospital. He had entered there about 2 weeks earlier complaining of pain and aching in his back, shoulders, and abdomen of several years duration. The abdominal pain had become worse some 2 weeks before admission. Eating precipitated the pain and vomiting sometimes helped relieve the pain as did anacin and bicarbonate of soda. He had noted anorexia for 5 to 6 months and had lost about 25 pounds. He thought he had passed several tarry stools. He denied use of alcohol. He had been treated for syphilis 22 years previously.

Examination. T. 97.8°, P. 100, R. 20 and B.P. 180/90. He was described as poorly developed and nourished and chronically ill. There were only four carious teeth remaining. There was an increased A-P diameter of the chest, and the lungs were hyperresonant. A few expiratory wheezes were present. The heart was slightly enlarged to the left, the rate and rhythm were regular, and Grade II apical and aortic area systolic murmurs were heard. The liver edge was down four finger-breadths below the costal margin and was hard. The tip of the spleen was palpable. There was dependent cyanosis of the lower extremities, and minimal ankle edema was present. Minimal pulmonary osteoarthropathy was noted in the fingers. Two "lipomas" were noted in the subcutaneous tissues of the chest. Rectal examination showed poor sphincter tone, and the prostate was moderately enlarged and boggy.

Laboratory Data. RBC. count was 7.7 million, Hgb. 20.8 Gms., Hct. 58%, reticulocyte count 4.2%, platelet count 723,800, WBC. count 6600 with 73% polys; urinalysis revealed a trace of albumin; STS was negative, BUN. 19 mg. per 100 ml. Total protein was 7.7 Gm. with albumen 3.4 Gm., bilirubin 1.85 mg. per ml., alk. phosphatase 5.6 BU., thymol turbidity 10.75 units, cholesterol 750 mg. per 100 ml., ceph. flocc. 2+ in 48 hours. SGOT was 158 units, and total serum lipids 1500 mg. per 100 ml. Prothrombin time 100%. Gastric analysis showed 4 mEq/L, free HCl after 50 mg. Histalog. C-reactive protein was 10+ and the next day 3+. Most stools were guaiac negative but a few were positive to 2+. Blood culture sterile. Red cell volume by the sodium chromate labelling method was 3608 ml. or 66.2 ml. RBC. per kg. Total blood volume was 6575 ml. or 121 ml per kg.; plasma volume was 2228 and Hct. 66%. A section of bone marrow was hypercellular but not diagnostic.

*From the Surgical and Laboratory Services of the Veterans Administration Medical Teaching Group Hospital, Memphis, Tenn.

Later in his hospital course his BUN. rose to 41 mg. per 100 ml. Skin tests for tuberculosis and histoplasmosis were negative, but the collodion agglutination for *Histoplasma capsulatum* was positive 1:16. Repeat Hgb. determinations were 19, 16.6, 15.2, and 15.6 Gm.; RBC counts were 7.2, 6.3, 5.6, 6.7 million; Hct. were 59, 52, 49, 56, and 49%. Platelets ranged from 1.23 to 2.60 million. Smear and culture of sputum were negative for acid-fast organisms.

X-Ray Studies. Chest film revealed left ventricular prominence, changes of pulmonary emphysema, irregular diaphragms, and old calcific hilar nodules. Upper GI. series disclosed a collection of barium outside the lumen of the antral portion of the stomach; the antrum appeared to be compressed by an external mass; the duodenum was normal; IVP were negative. A chest x-ray film taken about 3 weeks after admission disclosed a mottled consolidation in the right upper lung field. This developed into a homogenous density which then became a thick-walled annular shadow with findings suggestive of cavitation; it was believed located in the right middle lobe. Barium enema negative. Films of bones disclosed some osteoporosis and osteoarthritis.

EKG. The first tracing disclosed only notched P-waves. Three weeks later there was inversion of T-wave in V1 and V2 suggesting "anterior ischemia or right ventricular strain." More electrocardiograms several days later were interpreted as right ventricular strain.

Hospital Course. The patient was placed on an ulcer regimen. Two phlebotomies were performed. About 3 weeks after admission he developed cough, fever, sharp right chest pain, and bloody sputum. He received erythromycin and became afreble in 48 hours. During this period his SGOT levels were 158 and 148 and a week later 102. He also had urinary frequency and urgency and a GU. consultation disclosed 150 cc. residual. Only a trace of albumen was found in one of many urine specimens examined; no pus cells were ever found. The patient became progressively weaker, had marked anorexia, and quietly expired some 6 weeks after entering the hospital.

Clinical Discussion

DR. C. EASTRIDGE: We are presented today with a case of a 54 year old white man who was chronically ill with multiple systems involved and whose hospital course was progressively downhill despite therapy. I would like to discuss the different systemic components of this man's illness and then see if a diagnosis can be made that correlates with the pathologic processes that went on here.

Since this man was admitted with abdominal complaints we should first consider the gastrointestinal tract. With the history of eating precipitating the pain and vomit-

ing relieving it, we would have to consider gastric carcinoma and peptic ulcer if located at the pylorus. I feel these could be excluded with the above described gastrointestinal series and negative stools for occult blood.

Extrinsic pressure on the antral portion of the stomach as described on gastrointestinal series could account for the gastrointestinal symptoms by partially blocking the pyloric canal inhibiting gastric emptying. I would tend to discount the collection of barium outside the antral portion of the stomach as stated in the protocol because of the absence of abdominal physical findings one would expect with a free perforation in this area.

As far as the cardiovascular system is concerned there was without doubt some degree of pulmonary hypertension present as indicated by the increasing right heart strain pattern on EKG. This could be accounted for by increased vascular resistance secondary to the changes of emphysema and the destructive lesion in the right lung which developed while the patient was in the hospital. Increased blood viscosity as found in polycythemia also added to the cardiac work load.

The systolic type hypertension recorded on admission could indicate arteriosclerotic changes involving the larger arteries or it could be due to the increased viscosity of the blood found in polycythemia. (In patients with familial hypercholesterolemia and hyperlipemia, as I feel this patient had, a great per cent usually will have coronary atherosclerosis).

The lungs were described as emphysematous on admission. Later while in the hospital he developed rather acutely, an infiltrate in the right lung field which later changed to cavitation. One would have to consider with this picture a pulmonary embolus with infarction, putrid lung abscess or a necrotizing pneumonia of the lobar type.

Pulmonary emboli to cause infarction must be of the septic type or there must be some cardiac decompensation that will cause reduced blood flow through the bronchial arteries. There was no evidence of sepsis on admission nor was there any evidence of thrombophlebitis except the mild ankle edema which I interpret as evidence

of right heart failure. It is true, however, that there is a thrombosing tendency associated with polycythemia.

I think we can rule out putrid lung abscess because no foul smelling sputum was described. Specific necrotizing pneumonias such as due to staphylococcus and Friedlanders' bacillus could well have caused a picture similar to the above described lung lesion.

When we approach the problem of the liver we are faced with the differential diagnosis of the enlarged liver. It was palpated four finger breadths below the right costal margin and hard. There were no other descriptive terms applied from which other clues could be derived.

The majority of the findings from the tests of liver function add up in favor of a mild hepatocellular disease with no evidence of extrahepatic obstruction. Of the hepatocellular diseases, hepatitis could be ruled out because of the hardness of the liver, lack of tenderness, mild abnormalities of liver functions, lack of fever and absence of lymphocytosis. There was, however, sufficient impairment of liver function to bring about a depletion of serum albumen suggesting impaired synthesis associated with an elevation of the serum globulin. These findings are more in keeping with subacute or chronic form of liver disease as one would find in cirrhosis. With a negative alcoholic history, I would speculate upon cirrhosis of the post-necrotic type which may be latent for many years without causing symptoms.

Very large, hard livers can also be found in chronic right heart failure if it has been present over a long period of time. In this case the history is rather short with only possibly mild failure of the right heart. A rare condition that can cause a large liver associated with polycythemia or early liver carcinoma is the Budd-Chiari syndrome. This is produced by thrombosis of the hepatic veins causing much ascites and death usually comes in a week or two of the onset.

Carcinoma of the liver would, of course, have to be considered. The most common carcinomas found in the liver are metastatic in origin. Without evidence in this case of a primary site, I think we could eliminate

metastatic carcinoma as a cause of liver enlargement.

Although rare, 80 to 90% of the primary hepatocarcinomas arise in cirrhotic livers. In a series of 221 cases of post-necrotic cirrhosis recorded by McDonald, et al,¹ carcinoma developed in 14 per cent. Hepatoma, being the most common, is in the proportion of 10:1 to cholangioma. In the cases of hepatocarcinoma the alkaline phosphatase shows considerable elevation although in this case there was only a mild elevation recorded on admission. The transaminase elevations reflect the necrosis that occurs in the tumor nodules. It is said that a friction rub heard over the liver is pathognomonic of liver carcinoma but it has also been reported in hemochromatosis with a large liver.

An interesting facet in this case is found in the derangement of the hemopoietic system. There was a polycythemia present and it was a true polycythemia because of the measured increase in the red cell mass of 66.2 ml. per kg., the normal being 22 to 34 ml. per kg. I think this polycythemia was secondary, as opposed to the primary type, because of the lack of involvement of the other marrow elements.

Now as to the cause of the secondary polycythemia the previously described lung condition associated with poor oxygenation would, of course, need to be ruled out. This could have been done with blood oxygen saturation studies, but since none were reported we must also consider other causes for the secondary polycythemia.

Recently many unusual syndromes have been reported associated with neoplastic diseases. In some bronchogenic carcinomas there is a syndrome of hypochloremic alkalosis where the paradoxical aciduria of potassium depletion is absent. Others have been reported with an associated hypercalcemia without evidence of bony metastases. We have encountered here, a patient with hypercalcemia associated with hypernephroma without any evidence of bony metastases. In extensive hepatoma of the liver profound hypoglycemic episodes have been reported. Of these many unusual syndromes the one we are most interested in today is that of neoplastic disease associated with polycythemia. There are three neoplastic diseases

which are sometimes associated with polycythemia, these being cerebellar hemangioblastoma,^{2,3} hypernephroma,^{4,5} hepatoma.⁶ S. Osnes⁷ has shown that an erythropoietic stimulating substance is produced by the kidney and possibly by the liver, while Waldman and Levin⁸ have isolated a similar substance from cerebellar hemangioblastomas. They believe that certain tumors of these organs liberate excessive amounts of this factor which stimulate red blood cell production.

In this case we can rule out a cerebellar hemangioblastoma because of the lack of neurologic findings. There is no evidence of renal involvement by intravenous pyelogram or urine studies even though a negative urine does not rule out hypernephroma. It has been shown that polycythemia can occur long before the hypernephroma is large enough to cause urinary tract findings.

This then leaves us with a large, hard liver which could contain a hepatoma. Mcfadzean, et al⁶ report true polycythemia in 10% of 28 cases which developed hepatocarcinoma. These patients all had a preceding cirrhosis.

Clinical Diagnosis

1. Hepatoma in a cirrhotic liver with associated polycythemia.
2. Cor pulmonale.
3. Lung abscess.

Anatomic Findings

DR. H. BERNHARDT: The body was markedly emaciated. Both pleural cavities were obliterated by firm, fibrous adhesions and no fluid was present. The peritoneal cavity was free of fluid. The left lung weighed 700 Gm. and the right lung weighed 1200 Gm. In the right middle lobe there were numerous large abscess cavities filled with a necrotic purulent material which had a strong obnoxious fecal odor. The culture of this material contains *Esch. coli* with no other organism present. The sections of all lobes showed confluent areas of acute inflammatory exudate with abscess formation. Colonies of bacilli were prominent.

The liver and gallbladder weighed 3200 Gm. with the entire right lobe of the liver



FIG. 1

being replaced by confluent masses of bright yellow tumor tissue (Fig. 1). Many of these masses were umbilicated and necrotic. The left lobe of the liver was free of tumor and no cirrhotic process was evident. On microscopic section there were large aggregates of tumor cells in a trabecular pattern. The cells show marked pleomorphism, the nuclei being large with many giant forms present. The cytoplasm was granular and acidophilic. The trabeculae in many areas blended with the radial columns of normal parenchyma (Fig. 2). The tumor had a pseudolobular pattern with many areas of necrosis. The portal areas in the tumor bearing tissue showed marked fibrosis with fibrous bands of variable width. The adjacent normal liver in the left lobe of the liver showed marked sinusoidal widening with central lobular congestion and necrosis with no evidence of cirrhosis.

The pancreas was firm and on microscopic

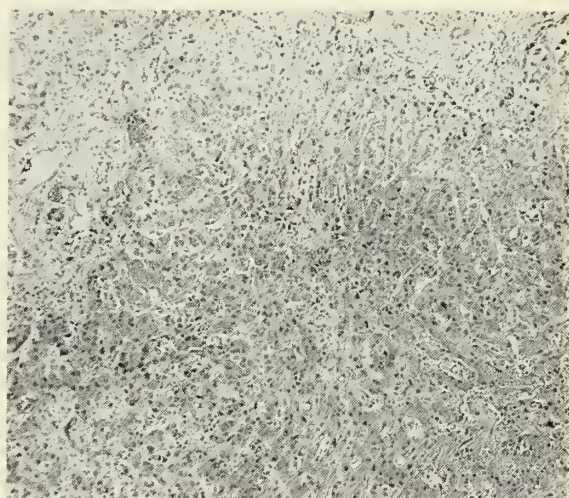


FIG. 2

section there was marked fine fibrous proliferation with areas of fat necrosis. Ducts and acini were moderately dilated.

The spleen weighed 300 Gm. and was congested and no extra medullary hemopoiesis was present.

A section of vertebral bone contained normal cellular components.

There was no evidence of metastases to lymph nodes or any of the viscera. The coronary arteries showed a moderate degree of atherosclerosis.

Final Anatomic Diagnoses

1. Primary carcinoma of liver, liver cell type with erythrocythemia.
2. Lobular pneumonia, bilateral with abscess formation (*Esch. coli*).

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President's Page



WILLIAM O. VAUGHAN,
M.D.

The image of Medicine is changing. We are witnessing a stupendous effort to change the practice of medicine and the private care of patients to a centralized controlled system. Just as Medicine is changing, so is the image of America. A country once devoted to liberty and enterprise, challenge and opportunity, has embraced the philosophy of fateism.

Freedom is still with us, but the reality is not. We can read the change in every aspect of American life.

Deep cuts in government taxation, painful even to the smallest wage earner, is felt. During a 40 hour week, the average American now spends eleven hours and twenty minutes working to pay his taxes.

We see a change in the programs of welfare. The galloping increases in social security, unemployment compensation, and a myriad of other devices of fraternalism. Now with the recent agitation for aid-to-the-aged, we find ourselves only a whisper away from outright socialized medical care.

We see changes in the efforts of politicians to buy popularity with subsidies and pressure-group legislation. American farmers, once the prototype of self reliant America, now line up annually to receive billions in federal handouts.

The change is evident in the steady growth of federal competition with private business. Government now operates some seven hundred businesses competing with private enterprise, runs the largest printing and publishing business in the world, conducts studies on every kind of subject. TVA, established as a program of flood control and conservation, is now the largest supplier of electricity in the free world, the largest consumer of coal on earth.

We are seeing the steady dislocation of power from states and local communities to Washington. The federal government has already preempted states rights in every conceivable field and is now moving into local responsibilities. We are seeing the gradual foothold being taken in aid to education.

Small business and professional men find themselves harassed out of operation by federal paperwork. Others are beginning to feel the same pressures. We are seeing a stepped up inflation induced by huge deficit budgets. Every child born in America now starts off life owing \$1,600 to the creditors of the United States. Our national debt, amounting to \$288 billion, is larger than all of the other debts of the countries of the world combined. The value of the dollar has been slashed in half in twenty years.

This is socialism in the fabian manner. Piece by piece the structure of the total state is being erected and is much nearer completion than most of us would like to believe.

The more our people are coddled, the weaker their determination to stand on their feet; the weaker their determination, the more coddling they want. The character of our nation is being silently destroyed.

The ultimate result of these tendencies is clear and frightening. Yet our politicians continue to outbid each other with extravagant give aways, with no apparent concern for the final destiny of the nation. Their performances suggest that they have not given thought of either the history or mechanics of freedom, or to the fates of nations which have abandoned it. For those who think they are blazing "new frontiers" are in reality following the oldest, most dismal path in history; the path to slavery.

President

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Address papers, discussions and scientific matter to R. H.
Kampmeier, M.D., Editor and Secretary, 8210 Vanderbilt
University Hospital, Nashville 12, Tennessee
Address organizational matters to Jack E. Ballentine,
Executive Director, 112 Louise Avenue, Nashville 5, Tenn.

R. H. KAMPMEIER, M.D., Editor and Secretary
Vanderbilt University Hospital, Nashville

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August, 1961

EDITORIAL

CHEST-FILM SURVEYS

The question has not been definitely answered as to whether or not mass surveys with the chest x-ray are worthwhile. Chest films, of course, give information relative to both the pulmonary fields and the heart and great blood vessels. Because of the declining incidence of pulmonary tuberculosis, regardless of the reasons, the continued diagnostic yield may be expected to decrease. Therefore, the diagnostic index relative to the possibility of heart disease becomes of great importance in the decision as to whether or not chest x-ray surveys are justified.

A recent study of 70 millimeter photofluorograms of the chest in screening a population for heart disease, is of considerable interest.

In Los Angeles, 2,252 individuals, who were civil service employees, were examined in detail between the dates December

1949 and July 1951. In addition to a physical examination, detailed history, laboratory tests, electrocardiograms, electrokymograms, and fluoroscopic study of the chest, a 70 millimeter photofluorogram was obtained. Eighty-three per cent were men, and 84 per cent were white. The ages were 20 to 70 years and 73 per cent were in the group of 30 to 60 years. At the time of this original examination the chest films were interpreted by chest specialists searching primarily for tuberculosis. Cardiovascular abnormalities were reported in less than one per cent of the films. These same films were later read independently by a radiologist and a chest specialist who had no information about the clinical status of the subjects. Each reader observed 4 neoplasms of the lungs. One reader (A) described 84 cases of pulmonary tuberculosis of which 38 were active. The other reader (B) noted 38 instances of tuberculosis of which 29 were active. Reader A reported cardiovascular abnormalities in 688 patients, or 32.5 per cent of the 2,120. Clinically 153 of these so-reported had heart disease. Reader A reported cardiac abnormalities in 71 per cent of the persons with clinical heart disease, and in 29 per cent of those who had normal heart. No abnormalities were reported in 29 per cent of the persons with clinical heart disease. The other reader (B) reported cardiovascular abnormalities in 355 or 16.6 per cent of the 2,120 in the total group. Among the known cardiac patients, abnormalities were reported in 49.4 per cent, none was recorded in 50.6 per cent. Abnormalities were reported in 13.8 per cent of individuals with normal hearts.

In the examination of the 2,120 chest films, 4 patients were found with pulmonary neoplasms. This yield is much higher than reported in chest-survey films primarily for the detection of lung cancer. The question of the relationship of Los Angeles smog to this frequent occurrence of lung cancer should be properly posed.

An analysis of the types of heart disease disclosed suggests that hypertensive heart disease is more apt to be identified than any other type. On the other hand, the results of the survey suggests that there are more efficient ways of finding patients with heart disease. Accordingly, mass chest x-ray sur-

veys need more recommendation than the detection of heart disease to justify their continuation.

A. W.

Chapman, J. M., Loveland, D. B., Goerke, L. S., Jacobson, G. and Rothrock, W. J.: Validity of 70 mm. Photofluorograms of the Chest in Screening a Population for Heart Disease, 12:521, 1960.

★

HEARINGS ON THE KING-ANDERSON BILL

I was much impressed with many things about the hearings conducted by the House Ways and Means Committee on H.R. 4222. The hearings are scheduled to last for a period of two weeks and our testimony was presented on the first day of the second week. The hearing room itself is most impressive with comfortable seats for the 200 or more visitors who were present. The committee, with a full membership of 25 members, was represented by more than one half of these members during most of the day in spite of the fact that Congress was in session on that day and that several quorums calls occurred. Witnesses were treated with great courtesy, but members of the committee, both opponents and proponents of the bill, were very tough and relentless in their cross-examination of the witnesses, and any statements made without good foundation in fact were likely to be discredited by this cross-examination. It seems to me that members of the committee must certainly be quite well informed on all of the advantages and disadvantages of this legislation at the end of the two-weeks hearing.

We were told while in Washington by "usually well informed sources" that the committee would not even take a vote on this bill during the present session of Congress. It is thought that the administration will concentrate their power for the passage of this bill early in the next session of Congress, possibly in January and February. Thus we have a period of several months during which we should continue to make every possible effort to educate the public by every means at our hand on this issue.

Representatives Howard Baker of the Second District and J. B. Frazier of the Third Congressional District, are members of the House Ways and Means Committee.

Thus all citizens of Tennessee have an exceptional opportunity to effectively express themselves in personal letters to these two Tennessee Representatives on the Committee. They will certainly have a key role to play when a vote is taken and the future of private practice of medicine in America will be tremendously influenced by the outcome of that vote.

Charles C. Trabue, IV, M.D.

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Special Item

Statement of Charles C. Trabue, IV, M.D.

Representing the Tennessee State Medical Association Before the Committee on Ways and Means, House of Representatives in Opposition to H.R. 4222, 87th Congress

Each state medical association was invited to send a representative to appear before the House Ways and Means Committee to record its stand on the King-Anderson Bill (H.R. 4222). Dr. Charles C. Trabue, IV, of Nashville was selected to introduce a statement from the TSMA and to appear as a witness. At the witness' table sat Dr. Charles C. Smeltzer, Knoxville, Delegate to the AMA, and Dr. William J. Sheridan, Chattanooga, President-Elect. Mr. Jack Bahlentine, Executive Director and Mr. Jack Drake, Public Service Director, were members of the delegation.

It is the hope of the officers of the Tennessee State Medical Association that the members of the Association will read the bill, familiarize themselves with it and express their thoughts to their elected representatives in Congress.

Dr. Trabue's statement should be read by every member so he may know what the situation is in Tennessee with respect to those in need of medical care but with limited resources. Brief editorial comment by Dr. Trabue on the hearings precedes this.

—Editor

I am Dr. Charles C. Trabue, IV, representing the Tennessee State Medical Association. I have been in private practice as a general surgeon for 27 years. I am past-president of the state medical association and am immediate past-chairman of the association's Committee on Legislation and Public Policy.

I should like to begin my testimony by enumerating briefly some of the programs in operation in Tennessee which provide medical care to persons who cannot afford the cost of such care with special reference to those programs which provide for the health needs of elderly persons. I should also like to review the activities of the Tennessee State Medical Association with its 2,800 member physicians which have led to the development of these programs. My purpose in so doing is two-fold. First, to demonstrate the fact that the medical profession in Tennessee is aware of the problems involved in providing needed medical care for persons in low-income groups and has moved vigorously and effectively toward solutions of these problems; and second, to establish that the already existing programs in Tennessee obviate the necessity, or even the desirability for passage of any further federal legislation in the area of health care at the present time, particularly such legislation as HR 4222.

The Tennessee State Medical Association was one of the first to adopt a service benefit type of voluntary prepaid health insurance program. This program has been in effect since 1949. The Tennessee Plan provides that participating physicians agree to accept as full payment of fees the amounts listed in the fee schedules of the policies sold by Blue Shield and 39 private insurance companies to persons in modest income groups. Specifically, persons eligible for service benefits are those single individuals whose annual incomes do not exceed \$2,400 and families whose annual incomes are less than \$4,200. There are approximately 1,200,000 individuals now covered by this Tennessee Plan.

More recently, the Tennessee State Medical Association has taken steps to expand and make more readily available the service benefit plan to Tennesseans 65 years of age and over. At our annual meeting last April, the House of Delegates approved a program whereby participating physician members of the Tennessee Plan would agree to reduce their fees by 25 per cent to persons over 65 within the above stated income groups. To make this plan effective the insurance companies must agree to pass on to the purchasers of the policies the savings in terms

of reduced premium rates. Blue Shield immediately agreed to pass on the full savings to the policy holder by making a 25 per cent premium reduction to those eligible. A reply from the commercial carriers has been promised within the next 30 days.

Thus, the physicians of Tennessee have taken action to provide a mechanism for persons of modest financial means of all age groups to prepay a part of their medical costs.

There exist many programs which provide necessary institutional care to those persons who are medically indigent. Of primary considerations are:

1. *The Tennessee Indigent Hospitalization Program.* The Tennessee State Medical Association conceived and sponsored in the state legislature in 1953 this program for hospitalization of medically indigent persons, of all ages, and this program has subsequently been adopted by several other states. It provides that persons determined to be medically indigent by screening committees at the county level are admitted for necessary hospitalization . . . with the attending physician agreeing to make no charge for services rendered during the period of hospitalization. The hospitals are reimbursed from a fund made up of state and county monies, with the individual counties participating on a voluntary basis. Ninety-three of Tennessee's ninety-five counties have elected to participate, and the non-participating counties have less than one per cent of the State's population.

2. *The Welfare Hospital Assistance Program.* This program provides up to thirty days hospitalization and nursing home care unrestricted as to the number of days for recipients of Old Age Assistance. The Tennessee State Medical Association, upon the request of the Governor of Tennessee, officially approved the utilization of federal funds which enabled the State of Tennessee to establish this program.

3. *The Medical Aid for the Aging Program.* This program, authorized under P.L. 86-778, went into effect in Tennessee July 1st of this year. It is estimated that it will provide hospital care for some 110,000 Tennesseans over 65 years of age who might not otherwise be able to pay

the costs of such hospitalization. It will also furnish persons in this age group with certain drugs. The Tennessee State Medical Association vigorously supported the implementation of this program. I believe it is significant that our association's House of Delegates voted not to accept payment for physicians' fees from funds allocated to financing this program.

At the same time, the House of Delegates approved recommendations to Governor Buford Ellington which would have established a somewhat broader M-A-A program. It was felt by the delegates that the program should initially offer not only some hospitalization and drugs but also nursing home care and out-patient x-ray and diagnostic services. However, it is most important that, in Tennessee, the machinery is installed and is functioning to provide health care for persons over 65 who cannot pay for such care. This machinery can be modified as circumstances warrant to provide for an expansion of the program.

In addition to the programs previously mentioned, there are others, including those offered by (a) the Veterans Administration; (b) the state government through its mental and tuberculosis hospitals, the latter which also admit non-tuberculous indigent patients suffering from chronic chest diseases; (c) city and county governments through their hospitals and clinic services; and (d) many private and teaching hospitals which provide in-patient care and out-patient clinical services to needy persons.

While this does not exhaust the list, it does establish that adequate facilities are available in Tennessee to provide medical care to those in need. Might I add that in my 27 years in practice I have never known a patient to be denied needed medical care because of lack of ability to pay for that care.

The record will show that the physicians of Tennessee, through their individual efforts, and their participation in the programs of their county societies and state association, have demonstrated their active concern with the problems involved in providing adequate medical care to our citizens and have developed and assisted in developing techniques and programs which have been of proven success in solving these

problems. Tennessee physicians have vigorously and enthusiastically supported those programs which they believed to be compatible with the paramount objective of the medical profession: that of providing the best medical care for the citizens of Tennessee.

And in addition to all of these organized programs of medical care there is the traditional willingness and professional obligation of all physicians to provide medical care for any sick person who seeks their help. This, of course, is regardless of their ability to pay. It is dangerous for the Federal government to preempt this time honored prerogative of the medical profession because in so doing they will take from the people certain benefits that they can never restore. Compulsion and government regulations are not conducive to the best quality of any professional service and can never replace the normal desire of a physician to go the last mile in rendering service to each patient who seeks him out and places confidence in him on a person-to-person basis. There are many things that cannot be purchased with tax money or improved with laws and regulations. The best quality of medical care is one of these things because it is found only in an atmosphere of complete freedom. Each step that the Federal government takes to destroy the freedom of medical practice will be a step to decrease the quality of care that the public will receive in the future.

It is entirely consistent with these facts that the Tennessee State Medical Association vigorously opposes the passage of HR 4222. As physicians and as citizens we feel keenly that we bear two responsibilities.

First, we must oppose any legislation such as HR 4222 which would ultimately and drastically reduce the quality of medical care. This bill, which would create a system of compulsory health care for one segment of our population, with benefits provided irrespective of need, must be recognized for what it is: a bill to initiate socialized medicine in the United States.

It would be tragically ironic if the Congress were to pass legislation such as this. It would not only have failed in its avowed purpose to fulfill a need, because the need is being met through resources presently avail-

able; it would, instead, have created a cure worse than the disease—a system which could only lead to the deterioration of the quality of medical care through the substitution of quantitative for qualitative medical care.

Spokesmen for organized labor have stated in Tennessee that this is their ultimate goal—an “across-the-board” health care package for all Americans, financed through the O.A.S.D.I. mechanism. Other proponents of this type of legislation have characterized it as “a foot in the door” . . . “only the beginning” . . . “if we can get this, we will be back for more and more.” I am certain that these gentlemen spoke with an honesty which equaled their candor.

The members of this committee are in a much better position than I to recognize the dangers inherent in this type of legislation—the drastic departure from the original concept of social security—the pressures for expansion which are built into this bill. And the members of this committee are far more aware than I of the extent to which these pressures can be activated.

And secondly, we feel, as citizens, that the day the Congress declares that it is no longer the obligation of the individual, the family, the community, or the state but that of the Federal government to assume the prime responsibility for the health care of a group of our nation's citizens, irrespective of need for such care, a major gulf between free enterprise and socialism will have been bridged. This will be an irreversible step. We will have passed the point of no return on the road to Socialism.

The physicians of Tennessee respectfully submit that the real issue before this committee is not that of providing necessary medical care for the aged because this need is being met through already existing programs. The real issue, we believe, is whether Americans are to be given a massive doses of Socialism—a dose that is like a medicine which is cumulative and has an irrevocable effect. These are our reasons for fighting for the defeat of HR 4222.

Supplementary Statement

I am Charles C. Smeltzer, M.D., Knoxville, Tennessee. I represent the Policy and Public Welfare Committee of the Knoxville

Academy of Medicine, and appear before you at the request of Congressman Howard H. Baker to place in the record the results of a poll conducted in the Second Congressional District.

Several weeks ago Mr. Baker requested the Knoxville Academy of Medicine to poll the physicians of his district on the two following questions:

1. Do you favor passage of the King-Anderson Bill?
2. Do you favor compulsory coverage of physicians under Social Security?

This poll was conducted by mailing questionnaire cards to the 483 physicians listed by the Tennessee State Department of Health in the Second Congressional District. Three hundred ninety-one cards were returned, a percentage reply of 81%—353 of these signed cards are in Mr. Baker's office, and these final 38 cards will be left there this afternoon.

The final tabulation reveals that 8 physicians favor the King-Anderson Bill, 358 opposed, and 25 are undecided—31 favor compulsory Social Security for physicians, 346 are opposed, and 14 are undecided.

The result of this poll speaks for itself and does not require elaboration.

Charles C. Smeltzer, M.D.

DEATHS

Dr. George C. Williamson, 71, Columbia, died June 20th in the Maury County Hospital. Dr. Williamson was a former president of the Tennessee State Medical Association.

Dr. Charles Decatur Blassingame, 75, Memphis, died June 20th at Baptist Hospital. He was a nationally recognized nose and throat specialist, professor emeritus of otolaryngology at the University of Tennessee College of Medicine.

Dr. Richard E. Shelton, 81, Chattanooga, died June 23rd in a Chattanooga hospital after a lingering illness.

Dr. Newton Hunter Culbertson, 77, Chapel Hill, died June 13th at Lewisburg.

Dr. John Allen Gentry, Chattanooga, died June 27th at his home.

Dr. Murrell Pinson, 75, Roan Mountain, died June 10 in Memorial Hospital, Johnson City.

Dr. George W. Tharp, 51, Knoxville, died on June 11 at his home.

Dr. Samuel T. Rucker, 97, Memphis, died June 24 at the Campbell Clinic and Hospital.

PROGRAMS AND NEWS OF MEDICAL SOCIETIES

Roane County Medical Society

The regular monthly meeting of the society was held in the Conference Room of the Medical Division of ORINS in Oak Ridge on July 25th. The guest speaker was Dr. M. Glenn Koenig, Vanderbilt University School of Medicine. His subject was "Common Problems in the Use of Antibiotics and Other Antimicrobial Agents."

Chattanooga-Hamilton County Medical Society

The usual monthly meeting occurred on July 11th in the Interstate Building. The program consisted of a paper entitled "Metastatic Carotid Body Tumor" by Dr. Edwin F. Chobot, Jr., and a presentation entitled "Struma Lymphomatosis (Hashimoto's Disease)" by Dr. Gene H. Kistler and Dr. Charles Swift.

Memphis-Shelby County Medical Society

The society held its monthly meeting on May 2nd at which time members were the guests of the medical staff of the Millington Naval Air Station Hospital at the Officers Club at the Naval Air Station. Dr. Bland Cannon, President of the Society, and Captain Weddell presided at the meeting. Captain J. H. Kuhl, chief of Naval Air Technical Training, gave an informative talk on the activities of the Naval Air Technical Training Command.

The scientific program consisted of the following: "Navy Medicine and Project Mercury" by LCDR. J. S. Maughon, MC, USN, who is Asst. Chief of Surgery at the Millington Naval Hospital. The presentation was given by Dr. Jamison, however, as Dr. Maughon had been ordered to Cape Canaveral, Fla. "The Navy in Outer Space" by CDR. J. C. Novak, USN Staff Public Information Officer.

Marshall County Medical Society

The Society held its regular monthly dinner meeting on June 20th at the Southland. Dr. Hoyte Harris presided over the business session.

Dr. Saxon Poarch introduced Mr. Coswell Hays of the Columbia office of Social Security Administration, and Mr. William E. Mitchell of Nashville, representing the

OASI office under the division of Vocational Rehabilitation, guest speakers at the meeting. A film entitled "The Disability Decision" was shown to the group.

NATIONAL NEWS

Hearings Begin on H.R. 4222

The House Ways and Means Committee began its hearing on the King Bill (H.R. 4222) on July 24.

The hearings have generated great interest. . . . According to the Ways and Means Committee, 187 groups and individuals have thus far requested time to present oral testimony. . . . Of this number, 106 were opposed to H.R. 4222, and 81 indicated they were in favor of the proposal. . . . Among the major non-medical organizations which have requested time to present testimony in opposition to H.R. 4222 are the U. S. Chamber of Commerce, the U. S. Junior Chamber of Commerce, American Farm Bureau, National Association of Manufacturers, and the Young Americans for Freedom. . . . Labor organizations predominate the list of groups which have sought time to speak in favor of H.R. 4222. . . . It has been learned that the Socialist Party of America is one of the groups which seeks to voice support for H.R. 4222 at the hearings.

The Month in Washington

(From the Washington Office of AMA)

The American Medical Association opposed three major provisions of a bill (S. 1552) that would greatly increase the powers of the federal government in regulation of the ethical drug industry.

These three provisions would turn over to the Department of Health, Education and Welfare and the Food and Drug Administration the responsibility for (1) relaying of drug information to physicians, (2) selecting the names of new drugs, and (3) deciding whether a drug is of value in treating human ills.

The AMA didn't take a position on the bill as a whole because certain of its provisions, "such as the Sherman Act and patent law amendments, are outside our area of competence."

Dr. Hugh H. Hussey, Jr., Chairman of the

AMA's Board of Trustees and Dean of Georgetown University (Washington, D.C.) School of Medicine, was the chief AMA witness at the opening of hearings on the legislation before the Senate Antitrust and Monopoly Subcommittee headed by Sen. Estes Kefauver (D., Tenn.). Dr. Hussey was accompanied by Dr. Ernest B. Howard, Assistant Executive Vice President of AMA, and C. Joseph Stetler, AMA's General Counsel.

With Congress trying for adjournment by about September 1 and much "must" legislation still to be acted upon, it appeared highly unlikely that Congress would complete action on the drug legislation this year.

Dr. Hussey reviewed for the subcommittee AMA's 70-year-record of taking the lead in endorsing legislation designed to insure the purity of drugs and food. The AMA carried on intensive legislative efforts in the field and "is generally credited with being one of the major forces that brought the first Pure Food and Drug Act into being in 1906," Dr. Hussey said.

Dr. Hussey cited these AMA aims that "we, as physicians, are desirous of achieving:

"—We want all physicians to be well-trained and fully informed on all aspects of the practice of medicine.

"—We want this body of knowledge and reservoir of skills to include a high degree of competence in the selection and proper use of drugs.

"—We want a continuing and expanding flow of useful drug products placed at the disposal of these physicians."

Dr. Hussey pointed out that the AMA already conducts an intensive program of informing physicians about new drugs and that this program is now in process of being greatly stepped up.

"The medical profession believes that the education of physicians is the responsibility and prerogative of the profession itself," he said.

Assigning responsibility for selecting names of new drugs to the federal government would merely be duplication of the program of drug nomenclature which has been operated for many years by the AMA and the pharmaceutical industry, Dr. Hus-

sey declared. This program also has recently been refined and improved, and will continue to meet the need for an orderly system for selecting names for new drugs.

In the final analysis, it is the physician and the pharmacist who must know the non-proprietary names of drugs, he said. These two professions now direct this naming process, and "we do not believe the responsibility for designating and revising names should be assigned to a governmental agency," he said.

Regarding determination of the efficacy of a new drug, Dr. Hussey said:

"We believe that only the physician has the knowledge, ability and responsibility to make a decision as to what drug is best for a particular patient. He should not be deprived of the use of drugs that he believes are medically indicated for his patient by a governmental ruling or decision."

"Physicians seek to treat the medical problems of *individual patients*. A physician does not treat ten cases of hypertension, he treats ten individual patients, each of whom has a medical problem he has diagnosed as hypertension. He may find that the same dosage of the same form of the same drug will be efficacious in each and all of his ten patients.

"Or he may find that one or more of them need different dosages, or different forms of this same drug. He may, indeed, find that one, two or three of them are allergic to the non-active ingredients used in this brand of the drug, and that a different brand, with other non-active ingredients, is the proper answer.

"Thus, in one patient, a specific dosage of a specific drug might be said to be efficacious. While in another, it would be described as totally ineffective.

"A physician can be told many things about a drug, including its chemistry, its mode of action and, to some extent, its toxic properties. But he must judge its efficacy."

MEDICAL NEWS IN TENNESSEE

Action Adopted by AMA House of
Delegates to Be Administered
by State Associations

The AMA House of Delegates meeting in

New York City, June 25-30, adopted a number of policy matters to be carried out by state medical associations. These dealt with the ethical relationship between doctors of medicine and osteopaths, medical discipline; surgical assistants; and relations with other health professions and services. All of these items cover controversial subjects and are greatly misunderstood by some physicians. In order to inform the medical profession in Tennessee, the following digest of the actions of the AMA House of Delegates is reported.

I

Osteopathy

In considering a report of the Judicial Council and three resolutions on the subject of osteopathy, the House of Delegates agreed with the intent of the report and resolutions, but instead adopted the following statement of AMA policy,

"1. There can never be an ethical relationship between a doctor of medicine and a cultist, that is, one who does not practice a system of healing founded on a scientific basis.

"2. There can never be a majority party and a minority party in any science. There cannot be two distinct sciences of medicine or two different, yet equally valid systems of medical practice.

"3. Recognition should be given to the transition presently occurring in osteopathy, which is evidence of an attempt by a significant number of those practicing osteopathic medicine to give their patients scientific medical care. This transition should be encouraged so that the evolutionary process can be expedited.

"4. It is appropriate for the American Medical Association to *reappraise its application of policy* regarding relationships with doctors of osteopathy, in view of the transition of osteopathy into osteopathic medicine, in view of the fact that the colleges of osteopathy have modeled their curricula after medical schools, in view of the almost complete lack of osteopathic literature and the reliance of osteopaths on and use of medical literature, and in view of the fact that many doctors of osteopathy are no longer practicing osteopathy.

"5. *Policy should now be applied individually at state level according to the facts as they exist.* Heretofore, this policy has been applied collectively at national level. The test now should be: Does the individual doctor of osteopathy practice osteopathy, or does he in fact practice a method of healing founded on a scientific basis? If he practices osteopathy, he practices a cult system of healing and all voluntary professional associations with him are unethical. If he bases his practice on the same scientific principles as those adhered to by members of the American Medical Association, voluntary professional relationships with him should not be deemed unethical."

II

Medical Discipline

In a major move designed to strengthen the profession's disciplinary mechanisms, the House approved the conclusions and recommendations of the Medical Disciplinary Committee, with only three word changes. The House discharged the committee with thanks and commendation and directed that its functions be assumed as a continuing activity of the Judicial Council.

One recommendation suggests that "The by-laws of the American Medical Association be changed to confer original jurisdiction on the Association to suspend or revoke the AMA membership of a physician guilty of a violation of the Principles of Medical Ethics or the ethical policy of the American Medical Association regardless of whether action has been taken against him at local level."

Another "encourages and urges that each state association report annually to the American Medical Association all major disciplinary actions taken within its jurisdiction during the preceding calendar year."

The report urged state and county medical societies to utilize grievance committees as "grand juries" to initiate action against an offender so as to obviate the necessity of making an individual member of a medical society complain against a fellow member.

The House suggested that each medical school develop and present a required course in ethics and socio-economic principles, and that each state board of medical examiners include questions on ethics and proper socio-economic practices in all examinations for license.

The report concluded with a recommendation that "American medicine at the national, state and local level maintain an active, "aggressive and continuing interest in medical disciplinary matters so that, by a demonstration of good faith, medicine will be permitted to continue to discipline its own members when necessary."

III

Surgical Assistants

In considering a Board report and two resolutions on the subject of surgical assistant's fees, the House approved the following five basic principles developed by the Judicial Council and the Council on Medical Service:

"1. Each member of the A.M.A. is expected to observe the Principles of Medical Ethics in every aspect of his professional practice.

"2. Each doctor engaged in the care of the patient is entitled to compensation commensurate with the value of the services he has personally rendered.

"3. No doctor should bill or be paid for a service which he does not perform; mere referral does not constitute a professional service for which a professional charge should be made or for which a fee may be ethically paid or received.

"4. It is ethically permissible for a surgeon to employ other physicians to assist him in the performance of a surgical procedure and to pay a reasonable amount for such assistance.

"This principle applies whether or not an assisting physician is the referring doctor and whether he is on a per-case or full-time basis. The controlling factor is the status of the assisting physician. If the practice is a subterfuge to split fees or to divide an insurance benefit, or if the physician is not actually employed and used as a bona fide assistant, then the practice is contrary to ethical principles.

"5. Under all other circumstances where services are rendered by more than one physician, each physician should submit his own bill to the patient and be compensated separately."

IV

Relations with Other Health Professions and Services

The House considered a Board report and twelve resolutions dealing with various aspects of medicine's relationships with allied health professions and services, including optometry. The Board recommended the creation of a new A.M.A. Council to handle all the problems involved. The House, however, accepted a reference committee suggestion for establishment of a new Commission to Coordinate the Relationships of Medicine with Allied Health Professions and Services. The Commission will be composed of seven members appointed by the Speaker of the House. Subcommittees, composed of from three to five members selected by the Commission from lists of names submitted by the scientific sections, will consider problems in specific areas. The Commission will correlate and catalogue the reports of the subcommittees and will act as liaison agent between the subcommittees and those AMA Councils where there may be overlapping interests.

Upper East Tennessee Pediatric Association

The first meeting of the Upper East Tennessee Pediatric Association was held June 24-25 in Gatlinburg. Dr. Joe T. Smith, Knoxville, presided. The scientific meetings featured Dr. William A. Nelson and Dr. John H. Wolaver of Knoxville; Dr. J. R. Bowman of Johnson City and Dr. Gordon Sell and Dr. Sarah Sell of Nashville.

The organization encompassed the old Knoxville-Oak Ridge-Maryville Pediatric Association, and the former Appalachian Association (Tri-Cities pediatricians).

New officers elected were Dr. J. R. Bowman of Johnson City, president; Dr. Oliver W. Hill, Knoxville, vice president; and Dr.

Robert Meadows, Knoxville, secretary-treasurer.

Some 35 pediatricians from East Tennessee, Virginia and Kentucky attended the meeting.

Upper Cumberland Medical Society

The Sixty-seventh Annual Meeting was held at the Cloyd Hotel, in Red Boiling Springs, June 20 and 21. The program consisted of the following: "Social Security for Physicians—A Slightly Different Angle," by Dr. Thayer Wilson, Carthage; "Cholecystitis Emphysematosa," by Dr. J. T. Jackson, Dickson, with discussion by Dr. Robert Sadler, Nashville; "Melanoma of the Cervix—6 Year Palliation," by Dr. N. Charles McMur-ray, Nashville, discussion by Dr. Malcolm R. Lewis, Nashville; "Analysis of 2,403 Consecutive Pediatric Consultations," by Dr. John M. Tudor, Nashville, discussion by Dr. Roscoe Kash, Lebanon; "The Treatment of Diastolic Hypertension," by Dr. Samuel S. Riven, Nashville, discussion by Dr. A. O. Miller, Scottsville, Ky.; "Cardiac Emergencies in Infancy," by Dr. C. Gordon Sell, Nashville, discussion by Dr. W. A. Hensley, Cookeville; "Uremia and the Artificial Kidney," by Dr. Fred Goldner, Nashville; "Fracture of the Femoral Neck in Children," by Dr. C. M. Hamilton, Nashville, discussion by Dr. John R. Glover, Sr., Nashville; "Respiratory Infection in Children—A New Look at an Old Problem," by Dr. Sarah H. Sell, Nashville, discussion by Dr. A. B. Qualls, Livingston; "Improvement in Apparatus for Intra Tracheal Anesthesia in Plastic Surgery. (A Preliminary Report)," by Dr. Beverly Douglas, Nashville, discussion by Dr. Kirkland Todd, Nashville; "Routine Vaginal Smears for Detection of Early Genital Cancer," by Dr. Harry H. Jenkins, Knoxville, discussion by Dr. W. P. Hutcherson, Chattanooga; "Fracture of the Tibia Without Internal Fixation," by Dr. Joe G. Burd, Nashville, discussion by Dr. A. B. Lipscomb, Nashville; "Functioning Anatomy of The Hand—Blackboard Demonstration," by Dr. Don L. Eyler, Nashville, discussion by Dr. Andrew Miller, Nashville; "My 50 Years in Medicine," by Dr. C. C. Howard, Glasgow, Ky.; President's Address by Dr. W. M. Jackson, Dickson; and "Some Conditions of the Hand Encountered in Ortho-

pedic Practice," by Dr. John J. Killefer, Chattanooga.

Vanderbilt University School of Medicine

A \$5500 grant for heart research from the Life Insurance Medical Research Fund has been awarded for heart research. The grant, part of \$1,189,000 the Fund is awarding for heart research, will be used by Dr. John G. Coniglio to study dietary factors influencing the disposition of orally administered labeled cholesterol. The grants are oriented towards basic research for a better knowledge of heart and related diseases.

University of Tennessee College of Medicine

The University Board of Trustees has authorized construction of six new buildings using capital outlay funds provided by the 1961 legislature. The Board approved UT's participation in building a clinical research hospital for the Memphis medical units, which is to be financed by city, state and federal funds.

Dr. Robert G. Jordan, assistant professor of pediatrics, Child Development Clinic, has received a \$500 grant in the program for mental health training and research. The purpose of the grant is to give mental health personnel a chance to observe and study new or different methods of operation in other states, to help them improve their own programs.

Eight Memphis physicians and one Nashville physician have been appointed to the staff of the University of Tennessee College of Medicine. Dr. Cecil B. Tucker, Director of preventable diseases of the Tennessee Health Department, Nashville, has been named a lecturer in preventive medicine.

Other appointed assistants are: Dr. Donald Anishanslin, dermatology; Dr. Huey H. Porter, otolaryngology; Dr. Tracy Levy, Dr. Alfred S. Nelson, and Dr. Vincent DiScala, all in medicine; Dr. William E. Sheffield, anesthesiology; Dr. Rufus E. Craven, surgery; and Dr. Claude D. Oglesby, ophthalmology.

Dr. Frank Roberts returned to the University of Tennessee Medical Units as asso-

ciate dean of the College of Medicine on July 1st. Dr. Roberts has been an advisor at the University of Shiraz in Iran during his two-year leave.

Dr. Ronald H. Alden, who has been serving as acting dean of the School of Biological Sciences at the Medical Units since July, 1960, has been named dean.

Four cancer specialists conducted a symposium recently for doctors, dentists, nurses and medical technicians. They were: Dr. Jerome A. Urban, associate attending surgeon at Memorial Center for Cancer, New York; Dr. Ralph A. Braund, director of the West Tennessee Cancer Clinic, Memphis; Dr. J. Donald Woodruff, of Johns Hopkins Hospital, Baltimore, Md., and Dr. Henry B. Turner, associate professor of obstetrics and gynecology at the College of Medicine, Memphis.

The University of Tennessee Institute of Radiation Biology has received a Public Health Service award of \$80,000 for 1961-62, and \$50,000 annually for four succeeding years, to conduct an expanded graduate training program.

Dr. John R. Sisk, Harriman, has accepted a surgical residency appointment at the University of Tennessee Memorial Hospital Research Center in Knoxville.

Thirty-one members of the staff of the University of Tennessee College of Medicine have been promoted and four Memphis physicians named instructors. In addition, six members of the staff of the School of Biological Sciences were advanced in rank.

Advanced from assistant professors to associate professors in the Department of Medicine are Drs. Jean M. Hawkes, John D. Hughes, J. Warren Kyle, and Otis Warr. Promoted from instructors to assistant professors in the department are Drs. Richard O. Bicks, Walter K. Hoffman, A. W. Julich, Phil Orpet, R. L. Wooten, Harry Davis, Lester I. Goldsmith, Daniel G. Copeland, and Charles B. McCall. Drs. John L. Hobson and S. Fred Strain, Jr., were advanced from assistants to instructors.

In the Division of Pediatrics, Drs. Robert G. Jordan, Michael J. Sweeney, and Arturo Aballi were named associate professors from assistant professors.

Dr. George Barlow, assistant professor of clinical physiology, was named associate professor and Dr. Charles L. Neely was advanced from instructor to assistant professor in clinical pathology.

In the Department of Surgery, Dr. James W. Pate was promoted from assistant professor to associate professor; Dr. B. F. Benton was advanced from instructor to assistant professor, and Dr. Glenn P. Schoettle was named instructor from assistant.

In the Department of Ophthalmology, Dr. Alice Deutsch was promoted from assistant professor to associate professor, Dr. William F. Murrah was named assistant professor from instructor, and Dr. Ralph Hamilton was promoted from assistant to instructor.

Drs. Martha Loving and Robert Ruch were promoted from instructors to assistant professors in the Division of Obstetrics and Gynecology.

Drs. Howard B. Hasen and William H. Morse were promoted from instructors to assistant professors in urology.

Dr. Huey Porter was advanced from assistant to instructor in otolaryngology.

Memphians named instructors are Drs. Ralph F. Morton and Edward McCall Priest, medicine, and Drs. J. D. Upshaw, Jr., and Marion Dugdale, medical laboratories.

In the School of Biological Sciences, the following promotions were made: Dr. Richard Walker and Dr. James Smith, in the Division of Pathology, were advanced from assistant professors to associate professors, and Dr. Yoon Kim and Dr. Warren Johnson were promoted from instructors to assistant professors.

Dr. William B. Wood, instructor in pharmacology, was made assistant professor, Dr. Hortense Louckes, assistant professor of physiology, was advanced to associate professor.

The School of Biological Sciences consists of five basic medical science departments which provide instruction in these areas to all students of the various professional colleges of the Medical Units.

PERSONAL NEWS

Dr. Edgar D. Akin, Wartburg, has been commended by the Oak Ridge Hospital medical staff for his excellent medical service rendered at the time of the Fork Mountain Mine accident.

Dr. James Rhea Lewis, Ripley, has been paid tribute in a special column of the Memphis Commercial Appeal, for his faithful community service.

Dr. Charles C. Smeltzer, Knoxville, recently addressed the Knox County Young Republicans Club. He discussed proposed medical care for the aged legislation.

Dr. Raymon W. McMullen, Greeneville, has resumed his practice of medicine and surgery in that city.

Dr. James Ray McKinney, Greeneville, has opened his office for the practice of medicine and surgery.

Dr. H. C. Capps will return to practice at Waverly where he will be associated with **Dr. Arthur Walker** and **Dr. A. C. Emmert**.

Dr. Howard Farrar, Manchester, has been elected Coffee County Medical Examiner.

Dr. Maurice Lowry, Lexington, has been elected chief of the medical staff at the Lexington Hospital. He succeeds **Dr. Warren C. Ramer**. Others elected were **Dr. Jack Stripling**, vice chief, and **Dr. Cornelia Huntsman**, secretary.

Dr. Alvin J. Cummins, Memphis, recently addressed a District meeting of the Kentucky State Medical Association in Glasgow, Kentucky.

Dr. Kenneth Susong has opened his office for the practice of medicine in Greeneville. He formerly practiced in Jonesboro.

Dr. Matthew Walker, Nashville, has been named to the Board of Hospital Commissioners of Nashville General Hospital.

Dr. I. H. Jones, Paris, is the new chief of the medical staff at the Henry County General Hospital. He succeeds **Dr. E. P. Mobley**. **Dr. W. G. Rhea** was elected as vice chief, **Dr. Arthur Dunlap** as secretary, and **Dr. R. Graham Fish** and **Dr. Joe Mobley** as executive committee members.

Dr. William N. Smith, New Tazewell, is president of the New Tazewell Lions Club.

Dr. William A. Nelson, Knoxville, has joined Baptist Hospital's radiology department.

Dr. Nathan F. Porter, Greenfield, has been elected president of the Greenfield Rotary Club.

Dr. R. C. Pryse, LaFollette, has been elected chief of staff of the LaFollette Community Hospital. **Dr. James Riggs** is vice chief of staff and **Dr. P. J. O'Brien**, secretary. **Dr. L. J. Sergeant** has been elected chief of medicine and pediatrics; **Dr. John C. Pryse**, chief of surgery; **Dr. M. L. Davis**, chief of obstetrics; and **Dr. Burgin Wood**, chief of laboratory and x-ray.

Dr. David P. McCallie, Chattanooga, has been elected president of the Tennessee Heart Associa-

tion beginning in 1962. **Dr. J. E. Acker**, Knoxville, is the current president for 1961.

Memphis physicians participating in a scientific exhibit at the meeting of the American Medical Association were **Drs. James Pate, William Dornette** and **Harwell Wilson**. **Dr. Edward Storer** discussed an electronic process for measuring stomach acid. **Dr. Glenn E. Horton** presented a paper on the pulmonary function as well as participated in a conference of the American College of Chest Physicians.

Dr. Telford A. Lowry is the new mayor of Sweetwater.

Dr. Joseph Brooks announces that he is opening an office for the practice of medicine in Clifton.

Dr. Lorenzo H. Adams, Memphis, has been installed as president of the Southeastern Society of Plastic and Reconstructive Surgeons.

Dr. Robert McBurney, Memphis, will speak on "Nursing Care of Surgical Emergencies" at a meeting of the District One of the Tennessee Nurses Association.

Dr. William G. Crook, Jackson, recently participated in a postgraduate course in pediatrics at the Massachusetts General Hospital in Boston.

Dr. Hollis Johnson, Nashville, was installed on June 25 as president of the American College of Chest Physicians.

Dr. Robert J. Raiman has joined **Dr. Robert Bigelow** as an associate in the practice of general surgery at Oak Ridge.

Dr. John W. Adams, Chattanooga, recently spoke on the subject "Cyto Technology" over a Chattanooga TV station. The program was sponsored by the Chattanooga-Hamilton County Health Council.

Dr. J. R. Bowman, Johnson City, has been elected president of the Upper East Tennessee Pediatric Association. Also elected officers were **Dr. Oliver W. Hill** of Knoxville, vice president and **Dr. Robert Meadows**, Knoxville, secretary-treasurer.

Dr. Samuel S. Binder, Chattanooga, announces the transfer of his offices for the practice of obstetrics and gynecology to Second Floor, Isbell Clinic Building, 535 McCallie Avenue.

Dr. Freeman L. Rawson, Knoxville, has been named President-elect of the East Tennessee Heart Association for the year 1961-62. **Dr. E. Converse Peirce**, Knoxville, was elected to the Board of Directors.

Dr. Albert Weinstein was elected as president, and **Dr. James Callaway** as secretary-treasurer of the Nashville Society for Internal Medicine.

Dr. Valton C. Harwell announces the opening of his office for the practice of obstetrics and gynecology in Columbia.

Dr. George Robert Burrus, Nashville, announces the opening of his office for the practice of cardiovascular, thoracic and general surgery at 3917 Gallatin Road.

ANNOUNCEMENTS

Announcing Middle Tennessee Postgraduate Symposium

A one-day Postgraduate Program entitled "Surgery for the Specialist and General Practitioner" will be presented jointly by the Vanderbilt University School of Medicine and the Tennessee State Medical Association, on Thursday, September 14. Registration will be held in Room T-2208, Vanderbilt University Hospital. There will be a registration fee of \$10.00 if you have not already enrolled for the 1961 TSMA Postgraduate Program.

The Academy of General Practice has approved the course for 6 hours of Category I credit.

Look for brochure in the mail within the next few days giving complete details of the program. Make your plans now to attend.

American College of Gastroenterology

The American College of Gastroenterology announces that its Annual Course in Postgraduate Gastroenterology will be given at the Sheraton-Cleveland in Cleveland, Ohio, on 26, 27, 28 October, 1961.

The faculty for the course will be drawn from the medical schools in and around Cleveland. The subject matter to be covered in the course, from a medical as well as a surgical viewpoint, will be, essentially, the advances in diagnosis and treatment of gastrointestinal diseases. There will be comprehensive discussions of pancreatic disease, biliary tract disease, electrolytes, peptic ulcer, etc.

There will be an "x-ray classroom" on the last afternoon, presented by an outstanding panel of specialists who will answer questions and present instructional demonstrations. There will also be a class in Cinegastrophotography.

One complete session will be held at the Cleveland Clinic and one at the Cleveland Academy of Medicine.

For further information and enrollment write to the American College of Gastroenterology, 33 West 60th Street, New York 23, New York.

Nation's Oldest Essay Contest

The Trustees of America's oldest medical essay contest, the Caleb Fiske Prize of the Rhode Island Medical Society, announce two subjects for this year's dissertation, open to any doctor of medicine in the nation, for which a cash prize of \$500 will be awarded. The subjects chosen are: "Recent Advances in the Treatment of Malignant Disease," and "Current Status of Cardiac Surgery." An essay on either subject must be typewritten, double spaced, and should not exceed ten thousand words. Essays must be submitted by December 11th to the Secretary, Fiske Fund, Rhode Island Medical Society, 106 Francis Street, Providence 3, Rhode Island.

New Drug Firm Launched

One of the features of the recent meeting of the American Medical Association in New York was that it served as a launching for a new drug manufacturing enterprise. This was the introduction of Philips Roxane, Inc., to the pharmaceutical industry.

The company introduced itself on a broad platform especially suited to informing the profession of its complex set-up. Philip Roxane rises out of a vast network of technologic operations here and abroad from which its extensive plans for pharmaceutical research and development have been drawn. Among its corporate operations is the Philips Electronics and Pharmaceutical Industries Corp. and N. V. Philips-Duphar of The Netherlands.

Headquarters for the new firm are located in St. Joseph, Missouri. Among its pharmaceutical projects is the development of a measles vaccine, now in extensive clinical trial, and for which patent applications have been filed.

To enhance and facilitate its research and marketing operations in this country, Philips Roxane has acquired several American affiliates. Among these is the Columbus Pharmacal Company of Columbus, Ohio, which will form the nucleus for marketing in the new organization, and which henceforth will operate under the new Philips Roxane name.

The Anchor Serum Company of St. Joseph, Missouri, is another operation. The products scope of Philips Roxane has been further extended with the acquisition of Thompson-Hayward Chemical Company of Kansas City, Missouri. This company is the leading formulator and supplier of chemicals used in feed supplements and in industry and agriculture. The unusual institutional character of the initial promotional step taken by the Philips Roxane at the AMA meeting was in keeping with its non-commercial approach in introducing itself to the medical profession.

U.T. Postgraduate Courses

The College of Medicine of the University of Tennessee offers two courses in September.

A five-day course in Anesthesia for the General Practitioner is scheduled for September 25-29, limited to 4 physicians.

A course in Legal Medicine will occupy September 27-29, providing 21 hours of Category I credit. Tuition is \$40.00.

Physicians Recently Licensed in Tennessee

Frank, Edward T., Jr., Memphis
Pellegrini, Maria L., Bolivar
Seagle, Finley A., Chattanooga
McCormick, Lon G., Manchester
Platkin, Alan B., Memphis
Haynes, Douglas B., Jr., Ridgely
Grose, James D., Millington

Salyer, Howard L., Blountville
Wolf, Rodney Y., Memphis
Perry, Edgar E., Memphis
Harris, Norman L., Memphis
Haynes, Lawrence B., Memphis
High, James M., Nashville
Looper, Fred B., Memphis
Fry, Mellon A., Jr., Memphis
Bell, James B., Knoxville
Clark, Jack C., Whitleyville
Corea, Charles J., Memphis
Payne, Gabe A., Jr., Hopkinsville, Ky.
Cunningham, David L., Spencer
Wells, Van H., Memphis
Rowe, Cecil D., Knoxville
Walker, Bruce E., Knoxville
Overholt, Bergein F., Knoxville
Goodson, William H., Jr., Huntsville, Ala.
Haddad, James B., Jr., Somerville
Sanders, Clarence R., Dickson
Lee, William H., Jr., Memphis
Burmeister, Douglas G., Milwaukee, Wis.
Farrow, George M., Elizabethton
Whitt, Hiram J., Roanoke, Va.
Anderson, Donald P., Memphis
Raiman, Robert J., Oak Ridge
Lindsay, Jack W., Memphis
Francis, William C., Nashville
Becker, Jerry R., Manchester
Belz, Irving, Memphis
Cooper, Joe B., Memphis
Duke, Don D., Memphis
Alexander, Warren A., Memphis
Ferguson, Alfred L., Kingston
Ledbetter, Rene B., Jr., Goodman, Miss.
Skinner, Wendell L., Bethesda, Md.
McCloy, Randolph M., Memphis
Bradley, John D., Jr., Birmingham, Ala.
Kyker, Paul G., Jr., Knoxville
Robinson, Fred, Nashville
Hibbett, Joseph C., Jr., Madison
Allen, James L., Kingsport
Allen, Robert L., Ft. Stewart, Ga.
Wampler, John M., Nashville
Creekmore, Robert S., Roanoke, Va.
Nobles, Eugene R., Jr., Boston, Mass.

The Tennessee Valley Medical Assembly

The Chattanooga and Hamilton County Medical Society, Inc. announces its 9th Annual Assembly, at the Read House, Chattanooga on Monday and Tuesday, September 25 and 26. American Academy of General Practice members are granted 11 hours of Category I credit for two days' attendance. The program contains 18 of the Nation's outstanding men in medicine and surgery. Ladies' entertainment is provided. Dr. Wernher von Braun, Director, George C. Marshall Space Flight Center, is the banquet speaker on Monday night, September 25.

Reservations should be made with the Chattanooga Convention and Visitors Bureau, 819 Broad Street, Chattanooga 2. Registration fee is \$15.00.

PLACEMENT SERVICE

The Placement Service of the Tennessee State Medical Association is designed to assist doctors and communities to get together. Further information and contacts to both physicians and communities are available from the Public Service Office, 122 Louise Avenue, Nashville 5, Tennessee.

Locations Wanted

A 31 year old married surgeon, graduate of the University of Virginia Medical School, would like clinical, assistant, associate or group practice in east of middle Tennessee community of 10,000-50,000. One year medical residency; three years surgical residency; Virginia license. Available fall of 1962. LW-399

A 31 year old married physician would like to locate in west Tennessee community of 5,000 or over in the practice of general and thoracic surgery. Will consider other locations. Interested in clinical, industrial or associate practice. Residency training, Tennessee license. Methodist. Graduate University of Tennessee Medical School. Available immediately. LW-403

A 36 year old married physician would like to establish general "family-physician type" practice in Tennessee community of 1,500 or over. No preference as to locality. Presbyterian. Graduate University of Tennessee Medical School. Tennessee license. Available immediately. LW-404

A 31 year old married physician would like to establish "family-type physician" general practice in Tennessee community of 2,000 or over. Will consider any locality. Baptist. Graduate of University of Tennessee Medical School. Tennessee license. Available October 1961. LW-405

A 32 year old married physician interested in associating in general surgery practice either clinical assistant or associate in middle or west Tennessee community 10,000 or over. Residency training. Certified American Board of Surgery. Protestant. Graduate St. Louis University School of Medicine. Available immediately. LW-406

A 32 year old married Internist would like group practice or teaching (institution) in Tennessee community of 20,000 or over. East or middle Tennessee preferred. Graduate Harvard Medical College. Two years residency. Available immediately. LW-409

A 30 year old married general practitioner, graduate of University of Tennessee School of Medicine, would like industrial, associate or institutional practice in east or middle Tennessee rural or urban community. Available September 1961. LW-410

A 58 year old general practitioner would like to establish practice with physician in middle Tennessee community. Would be interested in institutional or industrial practice, also. Graduate of Vanderbilt School of Medicine. Residency training; Tennessee license. Returning to Tennessee because of family illness. Available immediately. LW-411

A 41 year old married, general practitioner, graduate University of Tennessee Medical School, would like to establish clinical, assistant, or associate practice in east Tennessee. However, will

consider other communities, any size. Also would consider VA or Public Health practice. No residency training; Tennessee license. Available immediately. LW-413

A 33 year old married physician, presently in Air Force, would like to establish associate practice in OB-Gyn with physician in Tennessee community of 25,000 or over. Graduate University of Tennessee School of Medicine. Three years residency training. Tennessee license. Available early September, 1961. LW-414

Physicians Wanted

Physician in east Tennessee community of 6,000 would like an associate for general practice. Age 25-35 with one year residency. New, private office; examining rooms and equipment available. Hospital located in community. PW-134

Middle Tennessee community of 8,000 in need of internal medicine man. Must have 2 years internship and 1 year residency training. Office space located near hospital. Good location. PW-136

Pediatrician with two years internship, one year residency needed in middle Tennessee community of about 9,000. New hospital. Office building located nearby. Office furnished except for doctor's private office and equipment. PW-137

Southern Tennessee community of slightly over 500 in need of general practitioner. (Trade area much larger.) No other physician in community. Office space and some equipment available. PW-147

Small Tennessee community of 1,200 (trade area of 15,000) in lower middle Tennessee needs general practitioner. Two other physicians in community. Excellent opportunity for young physician wishing to establish good practice. Office space and housing readily available. PW-151

Southeastern community of 8,000 in need of general practitioner. Office space available with six months free rent. Eighteen miles from large city. Good location. PW-154

Physician in mid-eastern Tennessee town of 7,000 needs general practitioner to handle practice for one-two years while he enters residency training. Alternating residency training and possible partnership later would be considered. Rental basis for office and equipment. Excellent opportunity. PW-157

Physician, with experience in general practice as well as OB and/or surgery, needed in middle Tennessee community of 12,000. Will furnish office space, utilities and telephone. Eighteen bed hospital available. Age 30-45. Associate or assistant status. PW-158

One year free rent offered to one or two physicians wishing to locate in a thriving east Tennessee community, trade area of 35,000. Seventy-five bed hospital; near TVA dam and recreational area. PW-165

Physician in east Tennessee community, trade area approximately 40,000, would like associate general practitioner. New, unused, fully equipped 22 room office only 100 feet from lake. Hospital in area. One year internship required. PW-166

Every day new drugs which are potent and may seriously affect normal physiologic processes become available to physicians. Ignorance of such effects may be disastrous when the patient using them is placed under the stress of anesthesia and surgical manipulation.

Chronic Drug Therapy and Anesthesia*

C. R. STEPHEN, M.D.,† Durham, N. C.

Within recent years it has become recognized that a number of drugs which may be administered to a patient on a continuing basis can precipitate marked disturbances in the reactions of these patients to anesthetic drugs. It is important that the anesthesiologist be cognizant of such therapy so the drug may be discontinued in the preoperative period, or adequate precautions be taken to prevent complications during or after the operative period.

Phenothiazine Compounds

These drugs are prescribed frequently to relieve anxiety and promote sedation in the emotionally upset patient; indeed, in some centers they have been recommended for preoperative sedation. At the present time, however, it is recognized that most of these drugs, in addition to their sedative properties, possess an adrenolytic action which, when added to the effects of certain anesthetic drugs, and particularly when associated with spinal analgesia, results in a significant degree of hypotension. Moreover, this hypotension may be difficult to reverse because the adrenolytic effect prevents a normal response to vasopressor compounds.

Chlorpromazine (Thorazine) and promazine (Sparine) are believed to be the two worst offenders in this respect. It is sug-

gested that therapy with these drugs be discontinued at least 24 hours before the administration of anesthesia.¹ If preoperative medication with a phenothiazine compound is desired, promethazine (Phenergan) may be employed since it possesses minimal adrenolytic action.

Antihypertensive Compounds

Antihypertensive therapy with a wide spectrum of drugs is also becoming commonplace in the older age group. A number of these drugs, such as hydralazine (Apresoline), are eliminated from the body within 24 hours and do not cause known complications when anesthetic drugs are administered. However, any one of the numerous compounds which contain the Rauwolfia alkaloid reserpine may precipitate severe cardiovascular problems during or following the operative period.^{2,3} Reserpine does not achieve a full pharmacologic action for several days after beginning administration, and likewise its effects persist for one to two weeks after the drug is discontinued. Its action in the body is complex, but one of its effects is to destroy or nullify the norepinephrine stores in the body so that normal vascular tone is diminished.⁴ When anesthetic drugs, and particularly ethyl ether, are administered under these circumstances, severe hypotension may occur during operation or in the recovery period. This cardiovascular depression is resistant to therapy, and the patient may suffer renal shut-down or cardiac arrest.

In patients coming to operation who are

*Read at the annual meeting of the Tennessee State Medical Association, April 10, 1961, Chattanooga, Tenn.

†From the Division of Anesthesia, Duke University Medical Center, Durham, N. C.

on reserpine therapy, it is important if at all possible to discontinue administration of this compound for two weeks prior to surgery. If delay of the operation is not possible, the increased hazard to the patient must be recognized by both the surgeon and the anesthetist. This hazard possibly may be reduced by administering a relatively large dose of atropine (0.6 to 0.75 mg.) preoperatively, by avoiding ethyl ether as an anesthetic drug, by maintaining only light planes of anesthesia, and by having a solution with norepinephrine for intravenous drip available to counteract a reduction in blood pressure. Cardiovascular depression may be delayed in such patients until after the stress of surgery; therefore, they should be watched most carefully in the recovery period.

A new antihypertensive drug, guanethidine (Ismelin), is believed to act in a manner similar to reserpine, and the precautions outlined above should pertain to patients who are receiving guanethidine.

Corticosteroid Compounds

A large variety of steroid compounds are now being prescribed for numerous medical diseases. It is known that administration of such drugs suppresses the normal, physiologic action of the adrenal cortex and may induce atrophy of the gland. When the adrenocorticoid compound is discontinued, there ensues an indefinite and unknown period of time during which the adrenal cortex may be unable to respond adequately to major stressful situations such as surgical operations. If an operation is performed during this period of depressed function, severe cardiovascular depression may develop either during the procedure or more likely in the first six to eight hours postoperatively. This condition of "shock" does not respond rapidly to the conventional measures of blood replacement and vasopressor administration.

To aid in the prophylaxis of these difficulties, it is important to know preoperatively if the patient has been or is receiving steroid therapy. If a corticosteroid compound has been administered for more than five days within 6 to 9 months, treatment should be re-initiated prior to operation. Twenty-four hours before operation the

patient should be given cortisone acetate 100-200 mg. intramuscularly, and this dose should be repeated the morning of operation. During the postoperative period the drug should be continued for 4 to 5 days, with the dosage being reduced gradually. If the patient is receiving a steroid compound at the time of operation, the dosage should be boosted over the operative period. An intravenous preparation, hydrocortisone sodium succinate (Solu-Cortef), should be available for administration if required during the operative period, but it cannot be relied upon for complete replacement therapy because its action is short-lived and evanescent.

If a patient develops a shock-like syndrome during or after operation, and no obvious explanation can be found, the possibility of adrenal cortical insufficiency should always be entertained. As a therapeutic trial, relatively large doses of the intravenous preparation (200-500 mg.) can be administered rapidly; if this therapy appears effective, a slow intravenous drip can be continued and an intramuscular dose of cortisone acetate given for longer-range therapy.

It is not believed that supportive or replacement therapy as outlined above interferes with wound healing or induces a state of adrenal depression *per se*.

Antibiotics

Certain antibiotic drugs (neomycin, kanamycin and streptomycin, in descending order of importance) possess a neuromuscular blocking effect similar to d-tubocurarine when present in the blood stream in sufficiently high concentrations. Under certain circumstances the combination of these drugs with anesthetic agents like ethyl ether, which themselves possess a neuromuscular blocking action, or with curare-like muscle relaxant compounds, can cause a profound and prolonged respiratory depression lasting for several hours or more postoperatively.

Concentrations of neomycin great enough to cause difficulty may occur following intraperitoneal or intrapleural instillation of more than 0.5 Gm. Preoperative and/or intra-operative intramuscular administration in recommended dosages has not been

reported to cause trouble. Higher doses of the other antibiotics are required before respiratory depression may become a problem. The anesthesiologist should be warned in advance if the surgeon anticipates using neomycin intraperitoneally or intrapleurally.

Digitalis

Certain hazards are associated with rapid digitalization 24 to 48 hours prior to the administration of anesthesia. Inasmuch as the optimum dose of the digitalizing drug may vary from one patient to another, it is possible that rapid administration without waiting to ascertain the proper maintenance dosage may lead to relative over-digitalization in some patients. If general anesthesia is administered under these circumstances, a critical situation may develop because: (1) one of the actions of digitalis is to increase vagal tone; and (2) several anesthetic drugs also tend to increase parasympathetic tone. If these actions are summated, an effect simulating true over-digitalization may occur, with the development of arrhythmias, heart block, hypotension, and so on.

These complications may be avoided: (1) by administering digitalis preoperatively only when specific indications are present; and (2) when indicated, by digitalizing slowly and establishing a proper maintenance dose before operation. If signs similar to those of over-digitalization occur during operation, the intravenous administration of anticholinergic drugs (atropine 0.3 mg.) is of value.

Discussion

Patients who are entering hospital for

surgery should be told by their physician what drugs he has been prescribing for them so they may relay this information to the anesthesiologist and surgeon. The variety of preparations now available, and the deleterious effect which they may have on operation, place a heavy responsibility on the patient subjected to anesthesia and operating physicians to communicate specifically the types of drugs to which the patient has been exposed. Failure to communicate in the past has resulted in needless operative complications of a serious nature.

Summary

The hazards associated with the administration of certain drugs to the patient in whom operation is contemplated have been discussed. Knowledge concerning prior therapy with phenothiazine compounds, antihypertensive drugs, and corticosteroid preparations is important for the proper care of the patient. Digitalization in the preoperative period should be carried out carefully and only when indicated, and a decision to employ certain antibiotic drugs should be made before the anesthetic drugs are selected.

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These comments on the ambulatory treatment of children having had acute rheumatic fever or glomerulonephritis are instructive for the family doctor supervising the care of such patients.

Convalescent Care of Children With Rheumatic Fever or Glomerulonephritis*

JOSEPH A. LITTLE, M.D.,† Louisville, Ky.

Although early ambulation in both rheumatic fever and nephritis has been practiced to a greater or lesser degree for some time,¹⁻³ an increased interest was aroused by two reports^{4,5} that were read in 1958 at the meeting of The American Pediatric Society. The first dealt with the problem in rheumatic fever and the second in acute nephritis. Renewed interest in early ambulation in acute rheumatic fever was also reported from other sources.^{6,7}

Gibson and Fisher⁴ reported a follow-up on 44 patients ambulated early and compared this with 22 "controls." The experimental group was treated with cortisone and allowed up and about on the ward as soon as the patient felt able. This usually occurred within 48 to 72 hours after admission. Landrum, Simon and Mack⁶ reported a 2 to 14 year follow-up. Both studies revealed no difference in those ambulated early, and in those kept at bed rest in the usual manner.

At the University of Louisville, in the Department of Pediatrics, early ambulation has been followed the past five years. Activity has been based on a clinical classification of patients relative to their pulse in sleep, their cardiac status, and the C-reactive protein.

If all of these are normal, the patient is returned to school within three weeks and full activity within six weeks. These are considered *Class I* patients. *Class II* patients are those with a positive C-reactive protein only. These children are allowed

activity similar to the above except they may not take part in competitive sports until their C-reactive protein is negative.

Class III patients are those with an abnormal cardiac status but with a normal pulse during sleep. These children are allowed about the hospital or house after two weeks of bed rest,—complete during the first week and modified in the second. A home teacher or special school is advised. This routine is followed for a maximum of six months if the heart remains enlarged on x-ray examination. After this the child is allowed as much activity as his physical state tolerates.

Class IV patients are those with active carditis. These are kept at complete bed rest for two weeks or longer if heart failure persists. They are then slowly ambulated by first being allowed bathroom privileges for two weeks, followed by dining room privileges—one meal for two weeks, then two meals for two weeks, and finally three meals. After this they are ambulated as *Class III* patients.

Our results are comparable to those of others in that this degree of ambulation has not affected the number with, or degree of residual heart disease.

Our criteria for steroid treatment has become more strict, and our use of penicillin has increased. These changes have not affected the results.

The story in acute nephritis has been the same. Regardless of the laboratory findings, the patients resumed normal, uncontrolled activity within two to four weeks after acute nephritis. A two-year follow-up by McCrory, and associates⁵ of 35 children so ambulated with acute nephritis revealed only one with an abnormal Addis count. No

*Read at the meeting of the Tennessee Academy of General Practice, April 10, 1961, Chattanooga, Tenn.

†From the University of Louisville School of Medicine, Department of Pediatrics, Children's Hospital, Louisville, Ky.

similar investigation has been carried out in Louisville.

Conclusions

1. Early ambulation in both acute rheumatic fever and glomerulonephritis, as here outlined, has not been shown to be deleterious.

2. Returning these children to normal activity as quickly as possible is desirable, particularly as regards their feelings of adequacy.

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Gastrointestinal Bleeding with Cirrhosis. T. C. Merigan, Jr., R. M. Hollister, P. F. Grysky, G. W. B. Starkey, and C. S. Davidson; New England J. Med. 263:579, 1960.

A study of 158 cirrhotic patients experiencing 172 bleeding episodes in the Boston City Hospital between 1953 and 1959 is presented by the authors. In their opinion patients with acute liver failure manifested by ascites or jaundice are more apt to bleed from esophageal or gastric varices, to experience severe bleeding and to have greater mortality than bleeding cirrhotic patients without hepatic decompensation.

In an effort to determine the most accurate method to locate the site of bleeding, the diagnostic value of several methods was compared. By Method I, the clinical use of upper gastrointestinal examinations, esophagoscopy and balloon-tube tamponade were employed in 94 bleeding episodes while Method II used surgical and autopsy observations in 78 episodes. The combination of these two methods employed in 172 cases disclosed esophageal varices in one-half the cases, gastritis in one-fourth, while duodenal and gastric ulcers and unknown sites of bleeding comprised another one-fourth of the patients. On the other hand, Method I led to the impression of varices in 40% and of gastritis in 32%. Method II disclosed varices in 70% and gastritis in 10% of the bleeding episodes. In the authors' hands esophagoscopy was the most accurate diagnostic procedure in Method I; varices were found in three-quarters of 18 proven cases, while an upper gastrointestinal examination led to a correct diagnosis in one-half of the proven cases. Balloon-tube tamponade con-

trolled bleeding in 65% of those known to have varices.

The mortality, in spite of therapy, was high in those with ascites (82%) or jaundice (70%). In those without complications the death rate was about half as high.

Severe bleeding occurred in three-quarters of those with ruptured varices and was more common in those with ascites or jaundice. Mild to moderate bleeding, on the other hand, tended to be associated with gastritis and survival was common.

Tamponade was used in 68 episodes of bleeding, most of which were severe. Death occurred in 80%, esophageal ulceration in about half, while aspiration before death or pneumonia developed in about one of every seven cases. In those who were treated with nasogastric tubes, and not tamponade, half as many died, aspiration and pneumonia were less frequent and ulcerations developed in about 25%. The authors felt that the period of 24-48 hours of tamponade was too long and that traction of one pound was too much.

Surgical therapy was employed in too few cases to allow conclusions.

A decrease in morbidity and mortality would result, the authors felt, from the use of a number of procedures. Particular emphasis was placed on prompt and early action by the physician toward the control of bleeding, hepatic coma and infection; the establishment of an accurate diagnosis of the bleeding site and the evaluation of surgical measures. The careful use of tamponade was stressed. (Abstracted for Middle Tennessee Heart Association, by R. T. Terry, M.D., Nashville.)

Growing interest in, and proficiency with this diagnostic method demonstrates that it has a place in the study of the intracranial circulation.

Ophthalmodynamometry As A Diagnostic Aid*

RICHARD L. DeSAUSSURE, M.D.,† Memphis, Tenn.

Renewed interest in the Bailliart ocular dynamometer has indicated it can be of help in diagnosing cerebrovascular disease. The importance of instituting early therapy for carotid occlusive disease makes it necessary to use all diagnostic measures available and, as Smith and Cogan¹ have pointed out, ophthalmodynamometry has an important role here.

It has long been known that cerebrovascular disease is an important factor in the health of this nation and the following table may serve to emphasize this point. (Table 1.)

Table 1
(1958)

	United States		Tennessee	
	No.	Rate*	No.	Rate*
Heart disease, all forms	637,246	367.9	11,099	313.0
Malignancies, all forms	254,426	146.9	4,577	123.1
Vascular lesions affecting the central nervous system	190,758	110.1	4,833	135.8
Diseases of the cardiovascular system	893,489	515.8	17,338	487.6

*Based on 100,000 population

The figures are for 1958 and are the latest which could be obtained from the Health Department. It is interesting to note that cerebrovascular disease in the state of Tennessee is at a higher rate than that of the United States as a whole. This was not true according to figures available for 1955. It is hoped this is merely reflection of the interest of neurosurgeons in this state in cerebrovascular disease and not an actual increase in the number of cases.

Prior to 1954 we were frequently surprised to find negative arteriograms where

cerebrovascular disease was suspected. The clinical diagnosis of thrombosis of the middle cerebral artery was usually not confirmed by the arteriogram. At that time the carotid arteries were not examined routinely at autopsy studies and, unfortunately, our early arteriograms did not demonstrate the cervical portion of the carotid artery. We thought that carotid disease could be diagnosed by the criteria of unilateral blindness and contralateral hemiplegia. In 1954, Fisher² made an important contribution by reporting 423 consecutive autopsies in which he found that almost 10% of the carotid vessels had advanced disease. Subsequent to his article our arteriographic technic was modified and our routine cerebral arteriograms now include the cervical carotid arteries. There is, as a matter of fact, a trend at the present time to believe that cerebral arteriography is incomplete unless the arch of the aorta is demonstrated as well as the origin of all four cervical vessels.

Increasing experience with arteriography has demonstrated that the old concept of unilateral blindness and contralateral hemiplegia as a diagnostic criterion for carotid thrombosis is too restricted. We have seen a number of individuals whose symptoms have been quite minimal. The most recent patient in whom the diagnosis of complete occlusion of the left carotid artery was confirmed was but 38 years old. He was first seen on December 28, 1960. His history was of a two day hemiparesis, and slurring of speech which had occurred 3 months prior to the time of my examination. At the time of examination he was neurologically negative, yet arteriograms demonstrated complete occlusion of the carotid artery.

We now come to suspect transient episodes of aphasia, weakness, dizziness, blindness, or confusion as a possible warning symptom. We have also found that cervical

*Read at the meeting of the Tennessee Academy of Ophthalmology and Otolaryngology, April 10, 1961, Chattanooga, Tenn.

†From the Departments of Neurological Surgery, Baptist Memorial Hospital and City of Memphis Hospitals, Memphis, Tenn.

carotid disease is frequently associated with a carotid bruit and we routinely listen with a stethoscope over the cervical area in those individuals suspected of having such difficulties.

An article appeared in the *American Journal of Ophthalmology* in 1953 by Thomas and Petrohelos.³ They compared carefully the retinal artery pressure in the eyes. Unfortunately this article did not receive the attention it was due at the time of its publication. The retinal pressure was measured in 50 subjects and the blood pressure was recorded at the same time the ophthalmodynamometry readings were made. The authors stated that the first appearance of a collapsing pulsation of the retinal arteries represented the diastolic pressure. They emphasized that the systolic pressure must be read rather quickly, for if the instrument maintains the pressure the pulsations in the artery will reappear since intraocular tension is lowered. Once this occurs the systolic pressure cannot be checked for about 30 minutes. They also emphasized that the instrument must be held perfectly horizontally and one must work rather rapidly. As a result of their study of 50 patients and 199 gathered from the literature they stated that the average diastolic pressure varies from one eye to the other in the same patient within 5.2% and within 3.3% for the systolic pressure. The range, however, was much greater than this. They reported 8 cases of stenosis of the carotid artery in which there was at least 20% difference in the systolic pressure. In 15 of their 19 cases in which there was carotid involvement they showed a significant difference with the ophthalmodynamometer.

Since the publication of this article, a number of similar articles have appeared.⁴⁻⁷ It should be noted, as stated by Wood and Toole⁸ that the ophthalmodynamometer does not measure the retinal pressure directly but can be converted if the intraocular tension is measured simultaneously. However, it is not necessary to have a reading in millimeters of mercury since a difference between the retinal pressures in the eyes is significant. They believed the test was contraindicated if glaucoma was present or if there was evidence of occlusion of the retinal artery. Svien⁹ and Hollen-

horst⁹⁻¹¹ reviewed the literature and believe that Bauerman,¹² in 1936, was probably the first to call attention to a lowering of the pressure on the side of the occluded artery. These authors used only the diastolic pressure. Bakay and Sweet¹³⁻¹⁴ have shown that when the internal carotid artery is occluded the percentage of decrease in all portions of the accessible branches is about the same. Hollenhorst¹¹ reported 116 cases in which 70% of the patients had significant lowering of pressure in the presence of carotid disease. It was his belief that a lower pressure on the "wrong side" might indicate bilateral occlusive disease. It was his recommendation that readings be made in three positions.

Clinical Study

We recently reviewed 66 patients in whom cerebrovascular disease was suspected and on whom ophthalmodynamometry readings were made. It should be emphasized that these readings were made by various observers and that the postoperative reading was not always made by the same individual who had made the previous preoperative reading. Our figures are for the diastolic pressure only. We feared that routine reading of systolic pressure might possibly result in retinal damage from occlusion of the retinal artery. Our readings ranged from a low of 25 to a high of 110. Table 2 shows the results of our study.

Table 2
DIASTOLIC PRESSURE READINGS

	No.	Per cent
Greater than 10% difference with unilateral stenosis	19	29
Less than 10% difference with significant unilateral stenosis	6	9
Greater than 10% difference with no evidence of stenosis	11	17
No significant difference; no carotid disease	30	45

We found a difference of greater than 10% in 19 individuals when there was unilateral stenosis. There were 6 patients in whom significant unilateral stenosis occurred and in whom the ophthalmodynamometer reading showed less than a 10% difference between the eyes. There were 11 patients who had no evidence of stenosis but in whom there was a greater than 10% difference in the ophthalmodynamometer readings. There was one person who had

marked bilateral stenosis but in whom there was no significant difference between the two eyes. The remaining 30 patients had no significant difference in pressure and no evidence of carotid disease.

It is thought that some of the individuals who had no significant difference in the presence of unilateral stenosis might merely reflect the excellent collateral circulation which may occur. Figure 1 illustrates an

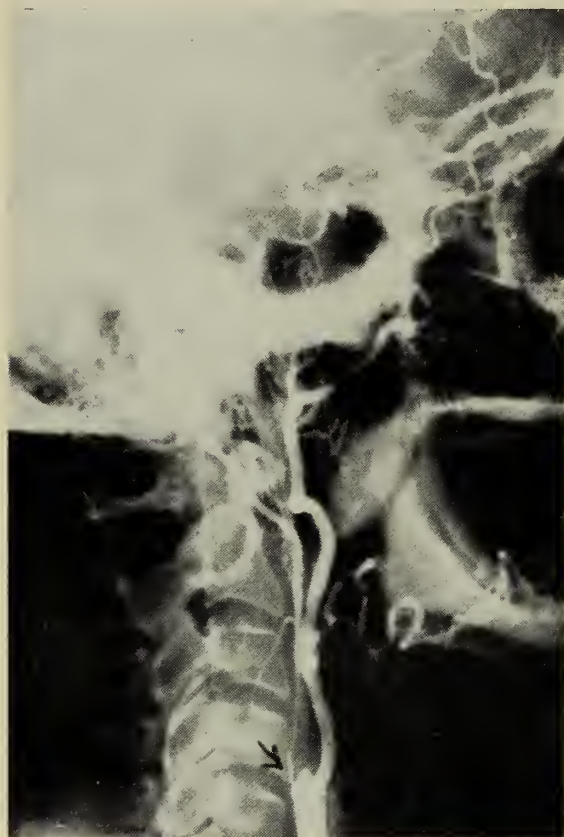


FIG. 1.

FIG. 1. Retrograde filling of carotid through ophthalmic artery.

individual with complete occlusion of his carotid artery, and who has back-filling of the carotid siphon through the ophthalmic artery, indicating the importance of the ophthalmic artery as a source of blood supply to the brain.

Discussion

From figures of this study one might draw the conclusion that ophthalmodynamometry is a diagnostic aid but not a definitive test. I believe if ophthalmodynamometry were done by experienced ophthalmologists the tests would be more accurate and, therefore, of greater value. The fact that the test has not been 100 per cent

accurate does not detract from its value as a diagnostic test, since few tests in medicine are infallible. Ophthalmodynamometry is a rather simple test in a cooperative patient and can be done without any special preparation and requires only a few moments' time. It has been our experience that pressure must be applied with the ophthalmodynamometer rather rapidly. If it is applied slowly it is sometimes difficult to recognize the end point which is a collapsing retinal artery. This is, I believe, one of the common sources of error in ophthalmodynamometry. It is my understanding that a tonometer test for glaucoma is used routinely in ophthalmologic study of the individual over the age of 40 and I believe this test should be carried out also as a routine measure in these individuals.

I do not recommend that arteriography be carried out in all persons in whom there is a significant difference in ophthalmodynamometry, but I believe these patients should be referred for a neurosurgical opinion. If, in addition to the lowered ophthalmodynamometric reading, the patient has a bruit in his neck, a history of fleeting paresthesias, fleeting blindness, transient hemiparesis, or aphasia, arteriography should be carried out.

We have had experience with 1700 patients, (Table 3), using Hypaque as a radioopaque material and local anesthetic. Our mortality rate has been within reason.

Table 3

Number of Patients	Number of com- plications	Per cent of com- plications	Number of Deaths	Per cent of Deaths
1700	42	2.5	7	0.4

The following cases may serve to emphasize cerebrovascular disease:

Mrs. B. (Our file-34331)—The patient was seen because of arteriographic evidence of severe stenosis of her right internal carotid artery. Preoperatively the ophthalmodynamometer readings were 50 in the right eye and 80 in the left. An endarterectomy was carried out on the right side with good results. A week postoperatively the pressures in the eyes were 50 and 60, and 9 months postoperatively they were 75 and 80. This would seem to indicate that her artery was still open and functioning 9 months postoperatively. (Fig. 2.)

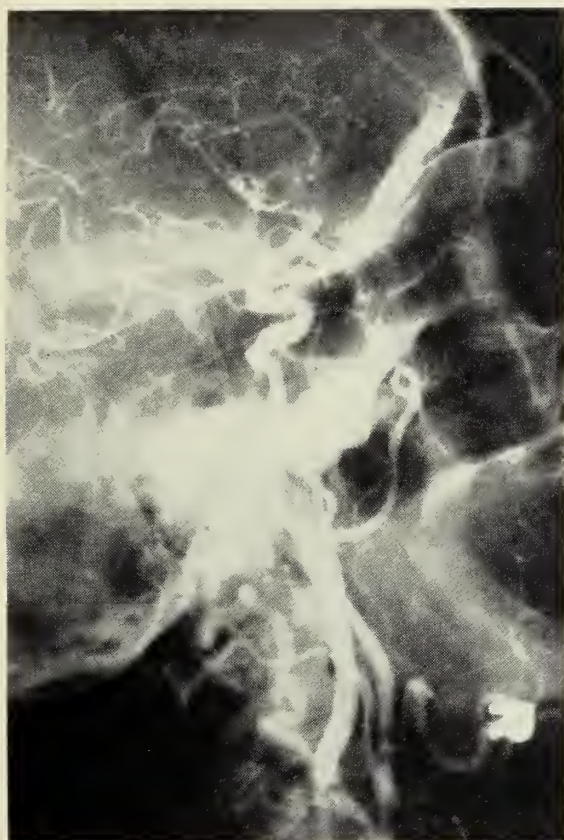


FIG. 2.

FIG. 2. Arteriogram showing preoperative carotid stenosis.

Mr. S. (Our file-36648)—Preoperative ophthalmodynamometer readings were 30 and 50. He had a 90% stenosis in the right internal carotid artery. Two months postoperatively the pressures were 50 and 60, and 4 months postoperatively 50 and 40. This would seem to indicate that perhaps his left carotid artery was becoming more severely stenosed; this is to be investigated. (Fig. 3.)

Summary

In conclusion, I would like to recommend that ophthalmodynamometry be made a part of routine ophthalmologic examination. It is probable that as more experience is gained by the individual observer his results will be more accurate. If the difference in the ophthalmodynamometer readings is significant, the patient should be referred to a neurosurgeon with arteriography in mind. It is undoubtedly true that a number of individuals who are referred for arteriograms on the basis of ophthalmodynamometry will have negative arteriograms. However, we believe that inasmuch

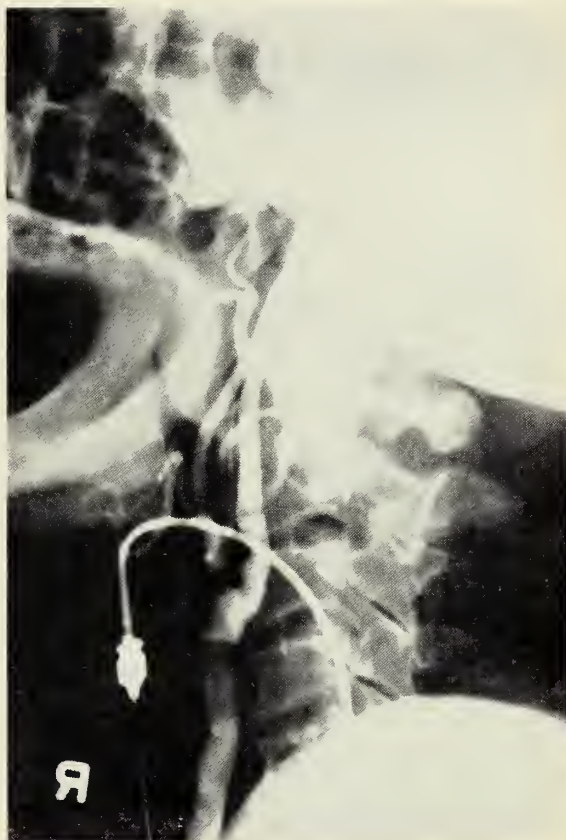


FIG. 3.

FIG. 3. Arteriogram, postoperative endarterectomy.

as arteriography is a relatively safe procedure the information to be gained from such an examination outweighs the risk of an arteriographic procedure.

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Factors of Risk in the Development of Coronary Heart Disease—Six-Year Follow-Up Experience, The Framingham Study. W. B. Kannel, et al, *Ann. Int. Med.*, 55:33, 1961.

An obvious need to obtain significant epidemiologic data in coronary heart disease led to the well-known Framingham, Massachusetts, study. It is well established that coronary atherosclerosis is present for many years prior to development of symptomatic coronary heart disease. Consequently, prophylactic treatment must antedate appearance of clinical symptoms, especially in coronary prone individuals. Although no single essential factor has been established, it seems reasonable to evaluate multiple interrelated factors associated with increased incidence of coronary heart disease.

The current report, presented at the Forty-second Annual Session, The American College of Physicians, May, 1961, deals with more detailed analysis of three factors associated with proneness to the development of coronary heart disease—elevated serum cholesterol levels, hypertension, and the electrocardiographic pattern of left ventricular hypertrophy.

Of interest were observations that in the younger age group, a male to female ratio of 13 to 1 occurred. In the older age group, 45 to 62 years, the male predominance dropped to 2 to 1. Contrary to many previously reported studies, there was almost as high an incidence of angina pectoris in females as in males; however, angina pectoris in association with myocardial infarction

with or without concomitant sudden death was much more common in males.

The well-recognized influence of hypercholesterolemia and hypertension, as well as an electrocardiographic pattern of left ventricular hypertrophy were confirmed as significant factors in the development of coronary heart disease.

Elevated serum cholesterol levels were less significant in females as compared with men. Elevation of fasting serum cholesterol above 245 mg.% was associated with a threefold increase in risk among men aged 40 to 59 years. On the other hand hypertension represented a greater risk factor in women than in men—namely, a 2.6-fold increase in risk on men 40 to 59 years of age and a six-fold increase in women the same age. Left ventricular hypertrophy by electrocardiogram was associated with a two- or three-fold increase in risk of development of coronary heart disease. Combinations of these three risk factors augmented further the risk of development of coronary heart disease. Men 40 to 59 years of age with none of these three abnormal characteristics exhibited a six-year incidence of 35.8 per thousand. When all three abnormal characteristics were present, a fourteen-fold increase occurred (approximately 500 per thousand). To warrant true concern regarding these abnormal factors were the observations that over 40% of the population aged 30 to 59 years had at least one, and 8% of women and 11% of men had two or more of these abnormal characteristics. (Abstracted for the Middle Tennessee Heart Association, by Ben J. Alper, M.D., Nashville.)

The author has effectively outlined diagnostic and therapeutic items of importance in the early stages of myocardial infarction.

Considerations in the Diagnosis and Management of the Early Stages of Myocardial Infarction*

PHILIP H. LIVINGSTON, M.D., Chattanooga, Tenn.

Early Symptoms

It is reasonable to believe that the earlier in myocardial infarction therapy is started the better will be the outlook.

Preliminary symptoms, usually anginal, may be noted as early as a week prior to the classical signs. An increase in the severity of anginal pain, an increase in the frequency of these pains or periods of more prolonged discomfort may be the first signs of myocardial infarction. When these occur the patient should be removed to the hospital, placed on anticoagulants and observed for electrocardiographic and enzymatic changes. Again, if nitroglycerine repeated several times is ineffective myocardial infarction must be assumed. More nitroglycerine is not only useless but may be dangerous. By further depressing the blood pressure it may lessen the coronary flow and, thus, may precipitate critical arrhythmias or shock.

Diagnosis of Myocardial Infarction

The diagnosis of myocardial infarction is based generally on the story of severe chest pain, weakness, drop in blood pressure, fever, leukocytosis and changes in the EKG. and enzymes.

Yet every one of these manifestations may be absent or nonindicative at some phase of the illness.

For example, it is not unusual for the patient to enter the doctor's office complaining of only mild discomfort or dyspnea. The blood pressure is often elevated during the first few hours. Pain may be principally in

the jaw or hands or elbows. The onset may be with pulmonary edema. The serum glutamic oxalacetic transaminase is generally highest the second day. The initial EKG. may be normal or show only a pattern of left heart strain.

The classical patterns of infarction are evident in a few hours in most instances but may occur as early as five minutes after the onset in a few. However, in the early stages one may note only: (Fig 1)

1. Change only on serial EKG. records.
2. Evidence of infarction confined to extrasystoles.
3. Inversion of T waves, especially lead I.
4. T-3 greater than T-1.
5. High T waves in the chest leads.
6. Large R in V-1.
7. Diminution of R in middle chest leads.
8. Occasionally only small q waves in chest leads V-2 through V-6.

Occasionally the vectorcardiogram will be diagnostic in the presence of a completely normal EKG. (Fig. 2)

Enzyme Changes

The discovery of the serum glutamic oxalacetic transaminase (SGOT.) as a measure of myocardial infarction was a medical milestone. Readings above 60 units are usually diagnostic of infarction and occur as early as the second day after the onset. The SGOT. is especially valuable when the EKG. is atypical or when the EKG. is obscured by previous myocardial infarction, digitalis effect or Wolff-Parkinson-White syndrome. A secondary rise in serum transaminase is an indication of extension of the infarction.

Unfortunately, the test may be positive

*Presented at the meeting of the Tennessee Academy of General Practice, April 10, 1961, Chattanooga, Tenn.

EKG CHANGES IN EARLY INFARCTION

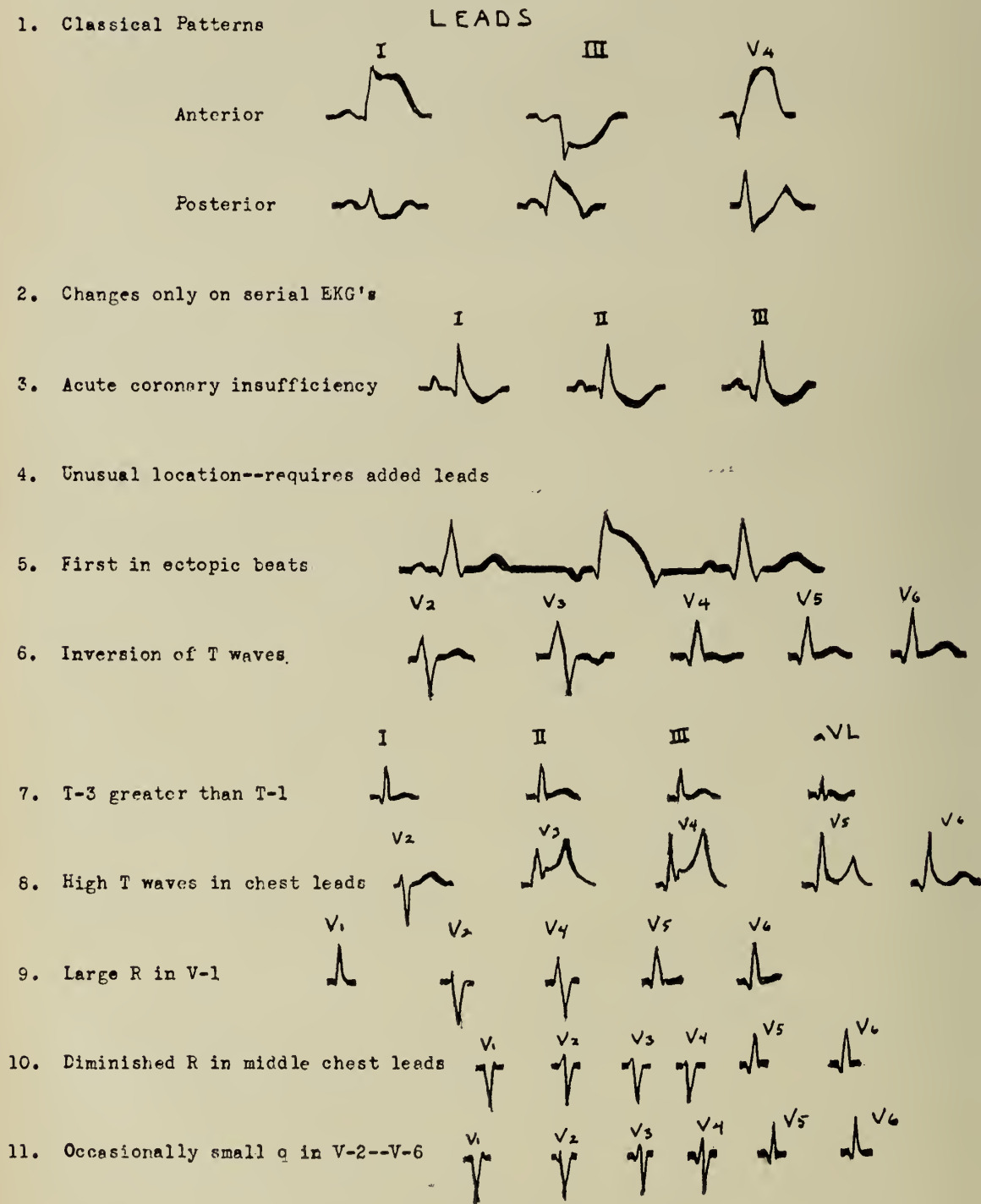


FIG. 1

for a few days only. Aspirin, injury to skeletal muscle and liver damage may cause elevation of the serum transaminase and their influence should be kept in mind.

Treatment of Myocardial Infarction

No illness puts greater demands on physician, nurse and medical attendant. There is need for constant observation, symptomatic

NORMAL ECG.

RAA 3/28/61

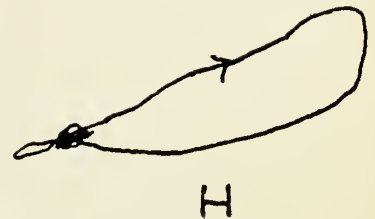
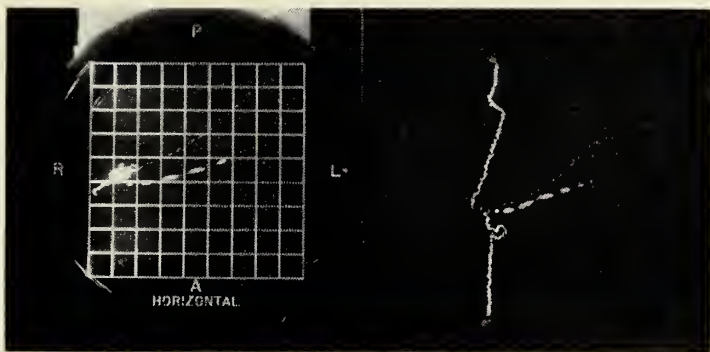
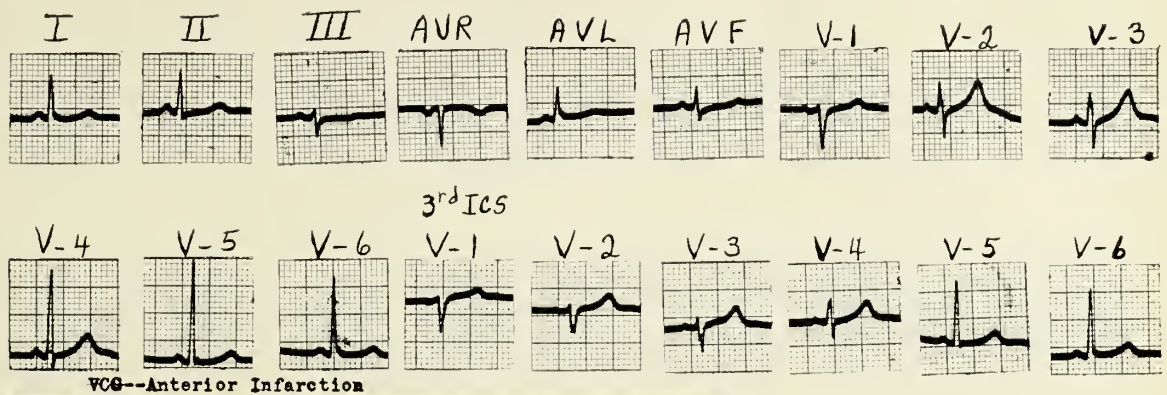


FIG. 2

therapy, gentle encouragement and frequently decisive action.

For the severe pain nothing acts as well as morphine in $\frac{1}{4}$ to $\frac{1}{3}$ grain doses given slowly intravenously to insure absorption. Morphine allays much of the fear as well as the discomfort. One should allow a few minutes for the drug to become effective, for excessive doses may cause serious respiratory depression. Atropine given with the morphine helps to prevent this slow breathing.

For those not able to tolerate morphine and for the elderly meperidine HCl (Demerol) or dihydromorphinone HCl (Dilaudid) may be preferred.

Aminophylline is contraindicated in that it further lowers the blood pressure. Oxygen rarely if ever diminishes the pain. Its use frightens many patients. Thus it is reserved for shock, heart failure, or cyanosis.

The patient is placed at *bed rest*. Whereas in health the sitting posture lessens heart work this has not been demonstrated as occurring in myocardial infarction. Few patients have desired or prefer the chair treatment. If they do the rocking chair is useful in that it allows some leg motion.

At first the diet is limited to 1000 calories to lessen work of the heart. If the blood cholesterol is high one may use a diet containing unsaturated fats. Very hot or cold items should be avoided or should be retained momentarily in the mouth before swallowing as they may initiate ectopic beats when they arrive in the vicinity of the heart. A test for blood sugar should always be done. The patient under 45 with myocardial infarction is often a diabetic but a sugar tolerance may be necessary for detection. The glucose tolerance test should be completed for all younger patients before they leave the hospital.

At the onset one is little concerned with the bowels but later a soft and easy movement must be insured. This can be accomplished with fecal softening agents or an occasional enema. A commode may be used if the patient prefers it and attendants are available to assist him to it.

Fear is a common element in this disease. Thus, sedation is most important. The barbiturates usually suffice. However, occasionally they produce a rash and here bromisovalum (Bromural), which rarely causes one, may be preferred. Hydroxyzine pamoate (Vistaril) in 25 to 50 mg. doses every

four hours is an excellent psychotherapeutic agent and is often anti-arrhythmic. Deprol (combination of meprobamate and benactyzine) seems to offset some of the depression. Unfortunately tranquilizers often lower the blood pressure and may bring on what appears to be a shock-like state. If tranquilizers are used blood pressure readings should be taken frequently and the drug should be stopped if the blood pressure begins to fall.

Prism lenses afford easy newspaper and television viewing.

Generally a mild fever is noted during the first few days presumably arising from absorption of damaged myocardium. Fever accelerates the pulse and increases heart work. Antipyretics such as aspirin or preferably amidopyrine lower the temperature and slow the pulse and are thus useful.

The prolonged bed rest leads to venous stasis. The mild exercise of elevating the arms above the head may tend to protect against the frozen shoulder syndrome. Flexing the knees and extending the toes may prevent venous thromboses. These movements may be done two or three times each hour. They also provide the patient an active role in his recovery.

Thrombolytic agents are now used effectively in venous thrombosis and in pulmonary infarction. They have been tried with some success in a few cases of coronary thrombosis. At present they must be considered as experimental.

Anticoagulating agents unquestionably lessen the number of embolic phenomena and may prevent further thrombosis. They should be used in all cases of myocardial infarction. It has been argued that in "mild cases" the danger from the anticoagulant is greater than that from the disease. Yet how often does one see a seemingly mild case turn suddenly dangerously ill. The danger of anticoagulants is minimal when administered under adequate control.

Heparin may be given for an early anticoagulating effect if desired. The blood clotting time should be maintained between twenty and forty minutes. A good scheme is to give 50 mg. of aqueous solution intravenously and 150 mg. subcutaneously and gauge the size of the second subcutaneous dose given twelve hours later by the clot-

ting time. Oral hypoprothrombic agents may be given with the first dose of heparin often assuring a good response 24 hours later.

Because the newer oral antiprothrombic agents are often effective in 24 to 48 hours and because fewer individuals are allergic to them heparin is rarely given. The most popular one today is coumadin (Warfarin, Panwarfin) given in an initial dose of 60 to 75 mg. if the blood prothrombin is normal. After 48 hours maintenance doses based on daily prothrombin times average from 2.5 to 20 mg. daily. Phenindione and its derivatives are equally useful. Rarely the only effective drug is the original anticoagulant, dicumarol. It would seem desirable to gain facility with one of these drugs and adhere to it. Anticoagulants are maintained at least until the patient is dismissed from the hospital. They should never be stopped abruptly for there may be a "rebound phenomenon" which initiates a new thrombosis. During the course of anticoagulant therapy one should watch for the persistent friction rub, recurrence of chest pain, cardiac enlargement and sudden anemia characteristics of hemopericardium occasionally produced by this drug.

Complications

A most serious complication of myocardial infarction is cardiogenic shock. It is diagnosed by the presence of pallor, cold clammy skin and a systolic blood pressure of 90 mm. Hg. or below. It may or may not be accompanied by congestive failure.

At the onset of myocardial infarction the blood pressure should be recorded every four hours. However, if the initial pressure is low or appears to be dropping it must be determined more frequently. If there is a mild fall one should at once begin a slow I.V. drip of 5% glucose, since to wait for the clear cut picture of shock is to invite difficulties in finding the vein. Preferably the flow should be through a polyethylene tube. This I.V. drip may be needed for all manner of drugs.

If the drop in blood pressure is not below 90 one may try hydroxyamphetamine (Paradrine) 20 to 40 mg. by mouth every four hours. It is useful because it does not appreciably increase heart work. If tranquil-

izers are being taken they should be stopped. Severe pain may be alleviated by morphine given slowly in the I.V. drip. Oxygen should be started.

If the full picture of shock develops resort should be made to the powerful I.V. sympathomimetic drugs. If there is no vein immediately available one may try metaraminal (Aramine) or mephentermine (Wyamine) intramuscularly hoping to raise the blood pressure and facilitate finding the vein. Aramine should be given in 40 to 75 mg. doses.

Levarterenol (Levophed) continues to be the most effective pressor drug. However, it must be given intravenously, its dosage checked frequently by blood pressure determinations. Generally an attempt should be made to maintain the systolic blood pressure at about 100 but in patients whose blood pressure was excessively high before the infarction it may be desirable to hold the pressure at higher levels. Levophed has the serious disadvantage that if the solution leaks out of the vein sloughing may result. Aramine and Wyamine rarely cause local reactions. Aramine is theoretically a more desirable drug but is not as effective as Levophed. Wyamine works well but should be given in much larger doses (200 to 300 mg. I.V.) than those usually recommended.

These pressor drugs must be given in doses sufficient to overcome shock and their use continued for days if needed.

At the time these sympathomimetic drugs are instituted a urinary catheter should be inserted, for the rate of urinary output is the most sensitive index of the degree of shock. Even if the systolic pressure is over 100, shock persists unless there is a secretion of 0.5 cc. of urine per minute.

Occasionally cortisone intravenously is said to potentiate the pressor drugs and should be tried in all desperate cases. Agress¹ has tried blocking the afferent fibers of the cardiac sympathetic with procaine and it has been claimed that this has been effective in a few cases.

It is the lack of adequate peripheral resistance with diminished cardiac output that creates the shock. Friedberg² has suggested that it may be necessary to insure adequate resistance by compressing the

aorta itself while an extracorporeal circulation is introduced. This is an heroic act for a desperate state.

Arrhythmias

Common to myocardial infarction are certain arrhythmias. At the onset ectopic beats, auricular fibrillation, or minor degrees of heart block are not unusual. Most of these clear within a few days without specific therapy. However, if they persist or increase in frequency or duration they add a grave strain to the heart.

Levine³ once suggested quinidine by mouth at the onset of myocardial infarction as a prophylactic against ectopic beats. Unless the patient is sensitive to quinine or has heart block I can see no valid objection to its use. One might prevent a single ventricular extrasystole arising in the supernormal phase that could initiate ventricular tachycardia, ventricular fibrillation and death. If the patient is sensitive to quinidine, Vistaril may be effective. Generally the arrhythmias are treated in the routine manner. But here with an acutely damaged heart the outlook may suddenly worsen so that extreme action may be required. The physician should have at hand procaine amide (pronestyl), hydroxyzine pamoate (Vistaril), ouabain and lanatoside C. All these may be given through the intravenous drip originally placed. For heart block atropine, isopropylarterenol (Isuprel) and molar lactate may be needed. Oxygen should be administered. The physician should understand closed chest resuscitation and, if available, have ready an external pacemaker and defibrillator. Massaging the soft infarcted myocardium, however, is a dangerous procedure.

Heart Failure

Heart failure is treated preferably with mercurials and a salt free diet. Digitalis is best given by mouth unless an emergency occurs. In patients having acute left heart failures with pulmonary edema, oxygen under pressure, antifoaming agents, in the form of 40% pure ethyl alcohol in water in the oxygen humidifier bottle, leg tourniquets, mercurials intravenously and morphine are required. Ouabain is the quickest digitalizing agent. Venesection may be life saving

but is used only if the blood pressure is high and there is no anemia.

Summary

Myocardial infarction is a dangerous illness not always readily diagnosed and often difficult to treat. Suggestions have been made in reference to its early detection and therapy.

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INFORMATION STATEMENT ON NEONATAL JAUNDICE

Prepared by the Committee on Fetus and New-born of the American Academy of Pediatrics, February, 1961.

Introduction: Kernicterus ("bilirubin encephalopathy") is a generally preventable complication of severe jaundice, occurring almost exclusively in newborn infants, usually in those with erythroblastosis fetalis. Kernicterus is often immediately fatal: if the infant does not die, he later exhibits neurologic deficits which vary in severity from such isolated involvement as partial deafness to severely crippling athetosis. The risks associated with erythroblastosis fetalis are quite widely recognized, and the criteria for treatment of this condition have often been stated. The purpose of this statement is to emphasize that kernicterus is not limited to babies with erythroblastosis fetalis, but may occur with jaundice from any cause, and at various ages, and that efforts should be made to prevent all cases of kernicterus.

1. Bilirubin* is believed to be the toxic substance that causes the nerve cell damage in kernicterus.

2. The risk of kernicterus is related to the concentration of bilirubin in the serum, but the relationship is not a simple one. In erythroblastosis fetalis, when the concentration of bilirubin in the serum remains below 20 mg. per 100 ml., the risk of kernicterus is very low; when the bilirubin concentration exceeds 30 mg per 100 ml., the risk is 50% or higher.² On the other hand, examples of nonerythroblastotic kernicterus have occurred in association with quite low concentrations of bilirubin in the serum of infants who received sulfisoxazole.¹

3. It is possible that the risk of kernicterus is not related to the cause of the jaundice, but only to the concentration of bilirubin in the serum. Until this is proven or disproven, it is proper to regard any very jaundiced newborn, or one with excessively high serum bilirubin, as a high risk so far as kernicterus is concerned. In addition to the large number of different blood-group antigens that may cause erythroblastosis fetalis, the

following conditions may be accompanied by dangerous concentration of bilirubin; hemorrhage into the tissues, infectious diseases, hereditary hemolytic disorders, and excessive dosage of certain drugs such as water-soluble vitamin K analogues.

4. Premature infants with erythroblastosis fetalis are more likely to develop kernicterus than are full-term infants. This does not necessarily mean that prematures are more vulnerable to bilirubin than full-term infants, because it has also been established that prematures are more likely to accumulate high concentrations of bilirubin in the serum. It may eventually be shown that prematurity per se increases the vulnerability to bilirubin, or perhaps it may be shown that in certain circumstances prematures are less vulnerable to particular serum concentrations of bilirubin. Until such evidence is available, the Committee suggests that one may consider that prematures are likely to develop kernicterus as the result of high concentrations of bilirubin in the serum, regardless of the cause of the increased concentration of bilirubin. However, it must be emphasized that the exact level of serum bilirubin that is dangerous varies with different babies; it is therefore impossible to specify a level that has universal applicability. This applies both to erythroblastotic and to non-erythroblastotic infants. Although 20 mg. per 100 ml. of serum has been shown useful in erythroblastosis fetalis, corresponding data are not available for non-erythroblastotic babies.

5. Kernicterus can occur at any age. This has been demonstrated by the onset of bilirubin encephalopathy at the age of 3 years or later in an occasional case³ of familial non-hemolytic jaundice (Crigler-Najjar syndrome). It has not been proved that age per se is a factor in the risk of kernicterus. Until such proof has been obtained, one should consider that a patient of any age, whether premature or full-term, and whatever the cause of the jaundice, is likely to develop kernicterus if the bilirubin level is excessively high.

6. Exchange transfusion is still the only procedure of proven effectiveness in the prevention of kernicterus. Other methods have apparently not been effective in reducing the risk of kernicterus in infants with severe jaundice or high serum bilirubin concentrations, or are still unproved.⁴ If hyperbilirubinemia is caused by blood group incompatibility, the blood used for exchange trans-

*Bilirubin—unconjugated or "indirect reacting" bilirubin. "Direct reacting" bilirubin is bilirubin glucuronide. Bilirubin is insoluble and toxic. Bilirubin glucuronide is water soluble and apparently non-toxic.

A year's reviews of toxicologic examinations are of interest since the practicing physician may gain clues to the cause of puzzling illness or unanticipated deaths.

Toxicology: A Survey of One Year's Experiences*

J. T. FRANCISCO, M.D.,† Memphis, Tenn.

In April 1959, the Shelby County Quarterly Court entered into contract with the University of Tennessee to provide scientific services for the Coroner's Office, which included the operation of a toxicology laboratory. The following data concerns an analysis of the procedures performed from January 1, 1960 through December 31, 1960. Specimens were submitted from the coroner's autopsies and from the local hospitals. It was surprising to note the frequency which certain compounds appeared in this survey. Table 1 includes a total listing of all analyses performed during this period.

Table 1

Alcohol		255
Methyl	127	
Ethyl	125	
Isopropyl	3	
Metals		99
Arsenic	48	
Lead	45	
Mercury	6	
Barbiturates		25
Blood types		25
Drowning tests		10
Alkaloids		8
Seminal fluids		6
Powder residue		5
Carbon Monoxide		4
Phenothiazine		3
Bromide		2
Chlorides		2
Cyanide		1
Halogenated hydrocarbon		1
Phenol		1
Salicylates		1
Acetone		1
Other		6
TOTAL		455

As is apparent that the major groups include alcohols, metals and barbiturates. Carbon monoxide is conspicuous by its paucity.

Alcohols

The alcohols constitute approximately 50% of the total number of determinations. This group of substances is primarily of interest in their relationship to traffic accidents, homicides and head trauma. It is with extreme rarity that ethyl alcohol is implicated as a principal cause of death. Ethyl alcohol was found present in 70% of all homicides that occurred during this period in Memphis and Shelby County. The percentage relates to the deceased only, since statistics are not available on the determination of alcohol in the perpetrators of these crimes. The percentage of homicides associated with positive tests for ethyl alcohol compares favorably with the results reported from other communities.¹

By contrast with ethyl alcohol, methyl or wood alcohol, has been a rather frequent cause of death. During 1960 there were 17 deaths attributed to methyl alcohol poisoning in Memphis and Shelby County. Frequently these came to our attention as the cause of sudden, unexpected or unexplained deaths. Methyl alcohol is available in many products, but apparently the most common source for this area is canned heat. Canned heat contains both ethyl and methyl alcohols. The former apparently exerts some protective influence on the deleterious effects of methyl alcohol.² Methyl alcohol itself is the least toxic of all the alcohols. However, a major end product of metabolism is formic acid which is eliminated slowly via the kidneys. Formic acid apparently affects enzyme systems and allows the build-up of other organic acids which produce an extremely severe metabolic acidosis. The liver is the principal site for the metabolism of both methyl and ethyl alcohols and these compounds are competitive

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†From the Institute of Pathology, University of Tennessee, College of Medicine, Memphis, Tenn.

for the same enzyme system. Thus, the presence of a high blood level of ethyl alcohol promotes a depression of the metabolism of methyl. This protective effect of ethyl alcohol is not seen in the usual experimental animal because of the inability of methyl alcohol to produce acidosis in these animals.²

Isopropyl alcohol is used rather infrequently but exerts its effect in much the same way as methyl alcohol in that a metabolic by-product produces acidosis.

Metals

The second major group of toxic materials encountered are the metals. These are principally lead, mercury, and arsenic.

In the past, arsenic has been a common homicidal agent, but murder by this method seems to be falling into disrepute. There are many sources of exposure to arsenic which includes medicines, environment, foods, and cosmetics. With the impetus to attract industry one should recall that industrial by-products are a source of potential danger. For example, water contaminated by industrial wastes may result in fish being contaminated by this metal, since many fresh water fish may ingest and concentrate arsenic in their flesh. The physician must be constantly aware of the ubiquitousness of this element. This fact is well illustrated by the following incident. In England many years ago there occurred a series of strange and unusual deaths for which no cause was readily apparent. It was finally noted by one observer that the homes in which these deaths occurred had a strong odor similar to garlic. Further investigation revealed that this garlic-like odor was the result of trimethyl arsine. This compound was produced in the following manner: A mold in the walls under the appropriate humid conditions of this part of England extracted arsenic from the pigments in the wall paper and re-excreted it into the atmosphere as trimethyl arsine. Trimethyl arsine is a very potent source for arsenic poisoning and in this instance was the causative agent for these obscure deaths.³

Lead is also a common metal to which exposure occurs, for it is found in paints, soil, gasoline, battery casings, and printing

types. All of these are excellent sources for lead poisoning. Chronic lead poisoning can be an extremely difficult diagnosis. The clinical picture is well documented but can mimic many other diseases even such as tuberculous meningitis or tabes dorsalis. The laboratory confirmation of chronic lead poisoning is also fraught with many difficulties. Aside from the constant danger of contamination of glassware and reagents there is an additional problem. The normal urinary concentration of lead is less than 8 gamma per 100 ml., but many patients with chronic lead poisoning will excrete no more than this given amount. It has therefore been necessary to use a provocative agent, calcium disodium, EDTA, to establish an increased body load of lead. EDTA is given in 1 Gm. quantities in a single intravenous infusion, and a 24 hour urine collection is begun simultaneously. (It is potentially dangerous to give this compound by an oral route, since the lead within the gastrointestinal tract may be absorbed into the blood and increase the body load of lead. Such an elevated body load of lead may precipitate lead encephalopathy.) The normal individual in such a test will usually excrete less than 500 gamma in 24 hours, whereas the person with an increased body load of lead will excrete over 1000 gamma per 24 hours.⁴

Mercury is also an element having wide distribution in the environment. Aside from the usual more or less acute mercury poisoning, chronic mercury poisoning is a real danger. Over-exposure may come from therapeutic, industrial, or laboratory origins. The chemists are well aware of the danger inherent in using metallic mercury and measure the changes in weight of gold foil in the laboratory to indicate environmental contamination. Workers in thermometer and barometer industries are constantly exposed to mercury. This compound is readily volatile at room temperature, and one cubic meter of air at 25° C. may contain 19.5 mg. of mercury vapor.⁵ In this form mercury is readily absorbed by the lungs and thereby may produce mercury poisoning. This potential source of exposure to mercury has not been emphasized as frequently as it should be to the medical and dental professions. It is amazing, in view

of the wide usage of mercury in medicine and dentistry, that chronic mercury poisoning is not more frequently noted.

Barbiturates

The third major group of compounds encountered in the toxicologic laboratory are the barbiturates. The frequency of these compounds on the national scene is apparent when one notes that as poisons they stand second in frequency to alcohols. As a cause of death they are equal in incidence to carbon monoxide.⁶ Whenever a physician is faced with a comatose patient, barbiturate intoxication should always be considered. To confirm a clinical picture suspected of being due to barbiturate intoxication both a qualitative and quantitative barbiturate levels should be determined in the blood. Tolerance to blood levels of barbiturates readily develops to the point that many patients who are chronic users of phenobarbital may frequently display a blood level of 5 mg. per 100 ml., and yet may show no clinical evidence of intoxication. On the other hand a blood level of 5 mg. per 100 ml. of a short acting barbiturate, such as amobarbital, (Amytal) is a lethal level.⁷ It is also important to be aware of the fact that a person with barbiturate intoxication does not always die when the blood level is at its peak. Thus, to interpret the significance of any particular blood level in such a death, one must know the rate of metabolism of these compounds. As a general rule the longer acting compounds have a half-life of 3 days, whereas the shorter acting compounds have a half-life of 20 hours.⁷ Analysis for barbiturates is greatly simplified if an ultraviolet spectrophotometer is used. However, with the great influx of new drugs on the market and the frequency with which multiple barbiturate compounds are being used, this method alone is frequently not sufficient; it often becomes a difficult laboratory procedure to separate and identify each barbiturate present.

Carbon Monoxide

Carbon monoxide is one of the most common poisons causing death on a nation wide scale. This is true in spite of the substitution of natural gas for illuminating gas in

most areas. Natural gas contains no carbon monoxide and is an extremely rare cause of death. However, when any carbonaceous fuel burns with an insufficient supply of oxygen, which may be caused by dirty jets in any form, in automobile exhaust fumes, and by conflagrations, carbon monoxide in large quantities may be released. The effect of this carbon monoxide is dependent upon two major factors: The concentration of carbon monoxide in the atmosphere and the interval of time to which the person is exposed to this atmosphere. These factors are illustrated in table 2.

Table 2

0.01%	No effect in 4 hours
0.06-0.07%	Early symptoms in 1 hour
0.10%	Dangerous to life in 1 hour

It is also important to emphasize that carboxyhemoglobin is very stable, yet the breathing of uncontaminated atmosphere will alter the carboxyhemoglobin in the blood from a level of about 30% saturation to 0% in 3 to 4 hours. If oxygen therapy is used this time can be shortened to one hour, and if oxygen plus carbon dioxide is used, this time can be shortened to 30 minutes. These facts dictate that if carbon monoxide poisoning is suspected a blood sample must be collected immediately prior to therapy if carboxyhemoglobin is to be demonstrated. Carbon monoxide may produce death even after all carboxyhemoglobin has been removed from the system. The mechanism for such death is associated with heart failure due to a weakened myocardium or pneumonia secondary to prolonged coma.

Summary

As society becomes more complex, and as medicine increases in scope, and as more industry moves to this state, the physician will be called upon more and more to become aware of toxic substances. Such areas as new tranquilizers, new insecticides, and the increasing problem of air pollution will foster new diseases. But the common poisons are still with us and every physician should acquaint himself with their signs, symptoms, diagnoses and prompt therapy.

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Information . . . Neonatal Jaundice

(Continued from page 328)

fusion should be "compatible." The best criterion of compatibility is that the donor red cells are not agglutinated by maternal serum even when the indirect Coombs' test is used for detection of possible incompatibility.⁵

7. In cases of erythroblastosis fetalis, it is easier to prevent severe jaundice and hyperbilirubinemia by early exchange transfusion than to reduce hyperbilirubinemia by later treatment. A single exchange transfusion done in the first few hours of life may be more effective than several late exchange transfusions. Thus, the possible need for exchange transfusions should be assessed early in neonatal life by routine search for early jaundice. It is essential to be prepared in advance by prenatal Rh typing, and Rh antibody screening tests, for cases of erythroblastosis fetalis caused by Rh incompatibility.

8. Jaundice must be looked for with the aid of white light (daylight or white fluorescent light).⁶ Yellowish light is of no value in the detection of early jaundice. One might expect that yellow light would accentuate jaundice, but actually it causes jaundice to be invisible. Ordinary incandescent lamps, in contrast to ordinary fluorescent lamps, produce a yellowish light that is very poorly adapted to the detection of early jaundice. (It is pink light that makes the skin look yellow.)

9. Kernicterus should be avoided by early search for jaundice in the neonatal period, measurement of serum bilirubin when jaundice seems excessive for the age of the baby, and exchange transfusion (or repeat exchange transfusion) of compatible blood when the bilirubin concentration in the serum threatens seriously to approach levels considered dangerous. By such a program, cases of erythroblastosis fetalis caused by ABO incompatibility, or E, c, K, and other blood-group incompatibilities, as well as unusual jaundice from other causes, will be detected and properly managed. It should be remembered that skin jaundice is frequently not consistent with the concentration of bilirubin in the serum. Bilirubin should be measured in all cases where there is doubt.

10. Standardization of procedure for bilirubin measurement is essential,* and search for other

criteria for assessing the risk of kernicterus should be continued. Assessment of the risk of kernicterus must be based not only on bilirubin concentrations in the serum but on frequent and careful clinical evaluation of the patient, including neurologic status. One should not wait for signs of brain damage before doing exchange transfusion, but exchange transfusion should not be withheld from a baby with signs of kernicterus.⁵ The risk of exchange transfusion itself, though almost negligible when done by experts, should be kept in mind. Unfortunately, 20 mg. per 100 ml. is not a magic number, since the critical concentration of serum bilirubin varies from baby to baby, due to variables most of which are unknown.

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*A tentative standard has been defined by a subcommittee of the Committee on Fetus and Newborn.⁷ Although there is no unanimity of opinion as to the best method of measuring conjugated bilirubin, it is agreed that it should be measured in addition to total serum bile pigments.

CLINICOPATHOLOGIC CONFERENCE

Baptist Memorial Hospital*

Whipples Disease

This 59 year old man had only a single 24 hour admission.

Around 1930, the patient was told that he had mild thyroid deficiency and was given 1 gr. thyroid daily. A goiter had never been noted. About 1954, he was suddenly seized in the middle of the night with pain in his right wrist and swelling in the right wrist and elbow. This apparently persisted for several months and then gradually improved. He weighed 232 pounds but reduced himself to 168 pounds. In 1956, he experienced some low back discomfort, with occasional aching pains in both ankles and knees but no joint swelling. At this time he apparently took triamcinolone 12 mg. a day, Bufferin, and chlorothiazide. The edema increased, and he changed to other corticosteroids. His physicians attempted many times to slowly wean him from these agents but were prevented from doing so by a recurrent fever and profound weakness. Steroids were always reinstituted. Neostigmine had not helped the muscle weakness nor had his arthritis been aided by chloroquine. In 1958, steroid withdrawals were attempted again, and the previously described syndrome was relieved by injection of ACTH. A diagnostic study at that time showed normal skull films, a FBS of 106 mg.%, and serum cholesterol of 120 mg.%. Complete blood counts and serologic tests were normal. However, the Wintrobe sedimentation rate was 38 mm. per hr., and his total eosinophil count was 212. Visual fields were intact. He was maintained for the next two years on prednisone and hydrochlorothiazide. Mercuhydrin was occasionally necessary. When seen in the Mayo Clinic in March 1960, blood pressure was 110/58 and pulse 88. He was described as pale with moderate puffiness of the eyelids and face. There was grade II edema of the lower extremities. Pubic and axillary hair were fairly adequate. The testes felt normal. A few coarse rales were heard at the lung bases. The chest was barrel-shaped. Neither the liver nor spleen were palpable. Prostate was enlarged, and there was a small spermatocele.

Laboratory Studies. Urinalysis: normal with sp. gr. 1.018; Hgb. 10.5 Gm.; WBC. 13,000; BUN. 63 mg.%; CO₂ 16.7, chlorides 96, sodium 135 and potassium 3.4 mEq/L. Blood uric acid was 5.3 mg.% and "true" blood sugar 44 mg.%, PBI. was 4.5 mcg.%. X-ray films of the chest and skull were normal. A 24 hr. urine specimen contained 1.0 mg. of 17-ketosteroids and 0.49 mg. of corticosteroids/24 hrs. (on 40 mg. prednisone). Pituitary gonadotropins were 5 rat units (normal 4-16 rat units).

*From the Department of Pathology, Baptist Memorial Hospital, Memphis, Tenn.

On the day of admission to Mayo Clinic the patient had eight loose stools. The following day a profound circulatory collapse was noted with temperature of 102° and a slow pulse. He denied having missed a dose of corticosteroids, and there was no essential change in his electrolytes. The chest films showed bilateral hilar congestion. He received hydrocortisone and antibiotics and improved. After this catastrophic occurrence, he continued to have weakness and diarrhea. Cortisone 200 mg. was administered parenterally and gradually decreased to 90 mg. daily.

Additional laboratory data included a serum carotene of 26 I.U., B.S.P. of 10%, normal bilirubin and negative blood cultures. Serum electrophoresis revealed albumin 1.72 Gm., alpha 1 and beta globulin 1.33 Gm., alpha 2 globulin 1.06 Gm., and gamma globulin 0.58 Gm. Total protein was 4.69 Gm.%, serum calcium 8 mg.%. Urinary porphyrin studies were negative. Glucose (true) tolerance test-fasting 35 mg., 1 hr. 85 mg., 2 hrs. 92 mg.%, 3 hrs. 105 mg.%. Sed rate was always elevated. The BUN. rose in his state of collapse to 80 mg.% and then fell to 40 mg.%. Serum potassium ranged between 4 and 5 mEq/L. X-rays revealed hypertrophic changes of the 4th and 5th lumbar vertebrae and calcification of the aorta. L. E. tests were negative. Electromyographic studies were consistent with mild peripheral neuropathy. Steatorrhea was not present. A muscle biopsy showed scattered degenerative fibers. There was no inflammatory process in nerves, and blood vessels were normal. There were pale, vacuolated cells in interstitial tissues resembling atrophic fat. Diagnosis: degeneration of muscle, nonspecific and mild.

After 2 weeks the patient returned to his private physician on 19 mg. cortisone i.m. daily, a 2 Gm. sodium diet, and potassium triplex.

The patient did very well for almost a year though for several months before admission he noted increasing and persisting diarrhea. When seen at 3 a.m. on the day of admission, he had abdominal pain, tachypnea and blood pressure of 85/50. The lungs were clear, and there were hyperactive bowel sounds. EKG. was essentially unchanged with low voltage. At the time, he was on 100 mg. b.i.d. of cortisone acetate.

Laboratory data disclosed an hematocrit of 33, Hgb. 9.5 and WBC. 21,800, 95 segs, 1 eosinophil, 4 lymphs; platelets were numerous. Electrolytes showed sodium 137, potassium 3.9, and chlorides 112 mEq/L. Urinalysis showed 1 plus protein, 2-3 coarsely granular and 1-2 finely granular casts and 8-10 white cells/hpf. Fasting blood sugar was 100 mg.%; stool specimen was benzidine positive. Chest films showed a patchy increase in markings at the bases. Heart was slightly enlarged. No extra luminal gas was noted on a KUB. The patient's respirations remained rapid despite a negative chest examination. About 24 hours after admission he became cyanotic, improved, then suddenly expired.

DR. CHARLES L. NEELY: There are several denials in the protocol that should be

clarified. An L. E. preparation was performed at Mayo Clinic by the clot method and was reported as negative during the time when the patient was receiving large doses of steroids. The protein bound iodine test was repeated after the patient had stopped taking thyroid for two weeks and the repeat determination was 4.4 mcg.%. The normal values for serum carotene vary a great deal over the country, and I do not know the normal value at the Mayo Clinic. However, most clinics report a low normal value of 50 I.U., and the patient's level of 26 I.U. is probably well below the normal level. Dr. Kimmel, would you review the x-rays for us?

DR. FRANK KIMMEL: A chest x-ray on March 4, 1961 revealed patchy areas of density in each lung field consistent with an interstitial pneumonitis or areas of pulmonary infiltration. There is no air under the diaphragm and the heart size is at the upper limits of normal. An x-ray of the abdomen reveals a scattered amount of gas in the small bowel and colon without areas of significant distention. No barium examinations are available.

DR. NEELY: Do you see anything in the films to suggest an inflammatory or neoplastic process that could be associated with malabsorption?

DR. KIMMEL: No.

DR. NEELY: This case will be discussed by Dr. Glenn M. Clark, associate professor of Medicine at the University of Tennessee and head of the Division of Rheumatology.

DR. GLENN M. CLARK: In discussing this case, I will begin with a vignette of the man's history and will elaborate on the laboratory determinations and his subsequent course. This patient had arthritis for several years before the onset of his acute illness. The arthritis, if we can believe subsequent examinations, was nondeforming but was apparently severe enough for his physician to initiate steroid therapy and continue it for several years. The patient, a middle-aged white man, subsequently developed relapsing fever, shock, signs of collapse, and in addition, at least two episodes of severe diarrhea. The discussion of joint disease will be influenced by the fact that this man was on high doses of steroids, and it is well known that when steroids are

withdrawn patients may experience diarrhea, and in certain cases, fever and collapse. So we have to decide whether these features are due to steroid intoxication and withdrawal or whether they are part of the patient's illness itself. Now to remove non-pertinent features, I would like to consider the possibility of an endocrine abnormality. It is stated that the patient had hypothyroidism and was put on thyroid medication that was continued for years. In addition, he has possible adrenal insufficiency with shock and fever associated with the withdrawal of steroids. The gonadotrophin studies were normal, and we can be certain he did not have Addison's disease because in the face of a relapse he responded satisfactorily to ACTH. I believe the only endocrine abnormality can be explained on the basis of the steroid ingestion. The second thing to consider is one of the wide spectrum of collagen diseases. The first thing to consider is rheumatoid arthritis, and anyone who does not show objective joint deformities after six years does not have rheumatoid arthritis. The second possibility is that of disseminated lupus erythematosus as the patient showed signs of polyserositis, had evidence of renal damage, and an arthritis that was suppressed by steroids; in addition, he had relapses with fever and G.I. symptoms when the steroids were withdrawn. However, some of the subsequent laboratory procedures will rule out the possibility of disseminated lupus. Polyarteritis is always to be considered in a patient who has a vague febrile course. However, I have never seen a patient with polyarteritis present with real arthritis. They have arthralgias and muscle pains, and they get pains that are described by the patient as being arthritis. However, I have never seen a patient with a tentative diagnosis of rheumatoid arthritis prove to have polyarteritis unless it is the type of polyarteritis described as the malignant rheumatoid disease often associated with steroid therapy.

Next we come to disorders somewhat more difficult to evaluate. Scleroderma is a disease that can cause facial swelling, disturbances in the gastrointestinal tract, and diarrhea. It can certainly produce kidney damage and pulmonary infiltrates. How-

ever, it would seem that after six years the patient would have developed peripheral signs that would support the diagnosis of scleroderma. Next, we come to dermatomyositis. The patient's severe muscle weakness, his relapsing course and fever, and the fact that he responded to steroids suggest this disorder. However, this patient never had a rash or exquisite muscle tenderness which makes this diagnosis unlikely. So, I will say that after consideration of the common so-called collagen disorders, none of them seem to take the pattern of what happened to this patient. So after ruling out these disorders, I think we should look at the rest of the protocol to see if there is something of a more specific nature. The serum carotene level of 25 units is certainly indicative of a malabsorption syndrome, and, incidentally, this low figure virtually rules out hypothyroidism. The patient had a calcium of 8 mg.%, a flat glucose tolerance curve, and, in addition, responded better to intramuscular than to oral steroid therapy. He apparently responded better to oral hydrocortisone than he did to the newer steroid derivatives, a phenomenon seen in the malabsorption syndrome state probably related to the fact that hydrocortisone is more easily absorbed than the newer derivatives. I am going to take the position that this patient does have a malabsorption syndrome; in addition, he has had antecedent arthritis and has developed fever and relapsing diarrhea that have responded to steroid therapy.

What are the causes of malabsorption syndrome that should now be considered? Scleroderma should be considered but has already been ruled out. The most common disorder that may produce this symptom complex is ulcerative colitis. Arthritis can certainly accompany ulcerative colitis. However, it is unusual for it to precede the diarrhea by a period of years. Another disorder to be considered is regional enteritis, a disease which can also cause diarrhea and arthritis. However, this, too, would be unlikely to have been preceded by the arthritis by a period of years. The students from my service keep reminding me of the possibility of a carcinoid syndrome. There has been a recent article in the *New England Journal of Medicine* in which a carcinoid

tumor had produced tremendous involvement of the gastrointestinal tract sufficient to produce a malabsorption syndrome. This patient also had involvement of the heart, renal failure, and a relapsing diarrhea. However, I do not consider this a likely diagnosis because the patient responded well to steroid therapy, and, although he had bouts of hypotension, there was no associated flushing, lower quadrant pain, or other stigmata of the carcinoid syndrome. Now we come again to our vignette and recall that this 59 year old man had arthritis followed years later by diarrhea and relapsing fever. In addition, he had evidence of polyserositis and weight loss, findings that favor the two major causes of malabsorption syndrome. The thing we might consider first is sprue. The patient did have an anemia, although we cannot be certain whether it was a macrocytic anemia, and he did have a peripheral neuritis. However, arthritis is not a prominent feature of sprue, and I do not believe we would be asked to make the diagnosis of sprue without a more definite knowledge of the patient's peripheral blood status. So we come now to what seems to be the only logical diagnosis in this case, Whipple's disease. Whipple's disease causes arthritis which may antedate the bouts of diarrhea and fever, and it occurs commonly in middle-aged males. It produces muscle wasting and responds dramatically to steroid therapy. It may also produce signs of tissue inflammation in the lungs and sometimes in the heart and kidneys. The features of this patient's clinical picture not adequately explained by Whipple's disease were probably caused by the steroid intoxication, and the patient's death was probably related more to steroid intoxication than to the Whipple's disease itself.

DR. NEELY: We want to thank Dr. Clark for a very excellent discussion, and I would like to ask why this man did not have more severe osteoporosis after such large doses of corticosteroids for six years.

DR. CLARK: The answer to why this patient did not develop osteoporosis is not easy, but I can relate some factors that may have prevented its development. First, the patient was a male and they are less likely to develop osteoporosis than females. Sec-

ondly, this patient was active and working throughout the course of most of his illness. Thirdly, he did not have rheumatoid arthritis. It's my personal opinion that people with diseases other than rheumatoid arthritis are less likely to become intoxicated with steroids. Finally, I would like to say that for some reason people who apparently have identical diseases and are in other ways identical, show marked variability in their response to steroid therapy.

DR. NEELY: Does anyone want to suggest other diagnostic possibilities or make any comments on this case? If not, will Dr. Strickland present the pathologic findings?

DR. CHARLES E. STRICKLAND: The body was that of a well-developed, well-nourished individual who had no increase in skin pigmentation and no peripheral lymphadenopathy. Pitting edema was present in the legs and over the dependent portions of the body, and there was an increase in fat over the trunk. The abdomen was distended. An extensive polyserositis was evident throughout, and there were extensive fibrotic pleural, pericardial, and peritoneal adhesions. The serosal reaction was primarily one of fibroblastic proliferation in which there were intermingled large numbers of macrophages that had either a delicate reticulated or a vacuolated cytoplasm. A few large macrophages were scattered through the interstitial areas of the lung, and in many of the smaller pulmonary arteries and arterioles there were recent bone marrow emboli. (Fig 1.) The heart weighed 620 grams, and there was a generalized hypertrophy of both the auricular and ventricular myocardium. Large numbers of macrophages were scattered throughout the subepicardial, interstitial and subendocardial portions of the heart. A diffuse, irregular induration was present in the mesenteric fat which was increased in amount. The small bowel was slightly thickened, and there was a slight yellowish discoloration to the thickened small bowel mucosa. A few areas of superficial ulceration were found in both the small and large bowel. Microscopic sections of the ileum revealed the typical club-shaped distortion of the villi produced by the prominent proliferation within the lamina propria of large

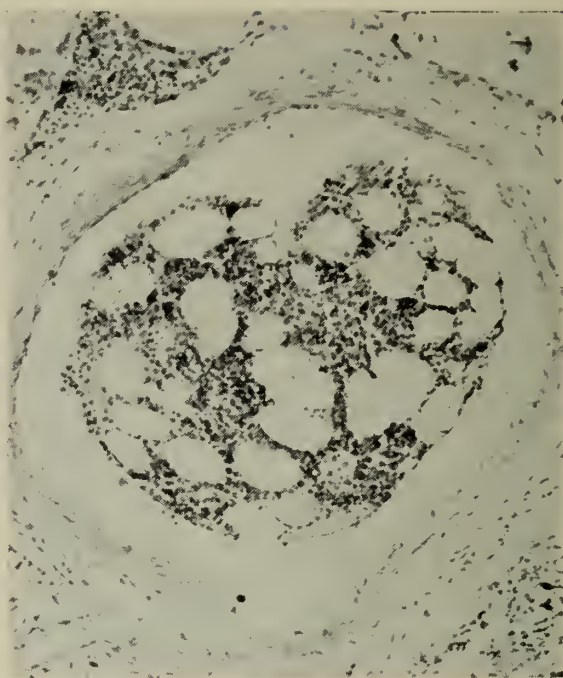


FIG. 1.

FIG. 1. A recent bone marrow embolus characteristic of those found in many sections of the lungs.

macrophages which give a positive PAS staining reaction. (Fig. 2.) Similar macrophages were found throughout the entire gastrointestinal tract. However, in the



FIG. 2.

FIG. 2. A section of ileum in which the villi are distended by macrophages containing material that is Schiff positive.

esophagus they were primarily in the periesophageal soft tissue and in the stomach they were primarily in the areas of serosal thickening. The thyroid was firmly adherent to the overlying sternothyroid muscles, which were relatively pale. Microscopic sections of the thyroid revealed a normal architectural pattern. However, in adjacent skeletal muscle there was extensive macrophage infiltration of the muscle without significant associated inflammatory or degenerative tissue response. The adrenals were one-third normal size and showed a generalized cortical atrophy involving principally the inner cortical zones.

There are two unusual features in this case which bear further emphasis. The mesenteric lymph nodes were not large and cystic but were quite small and difficult to find, a distinct contrast to the typical case of Whipple's disease. This generalized lymphoid hypoplasia is probably a reflection of the prolonged period of steroid therapy. The source of the bone marrow emboli, which in this case may have been the immediate cause of death, is obscure.

DR. NEELY: Dr. Diggs has been fascinated with the bone marrow emboli that are found in sickle cell disease.

DR. DIGGS: There isn't any question about the occurrence of bone marrow emboli in sickle cell disease as we have seen spicules of bone in the arterial vessels of the lung. Anatomically, this phenomenon

can be explained on the basis of occlusive vascular phenomena in the bone marrow which will cause necrosis of bone marrow with the subsequent production of sufficient pressure in the closed cavity to extrude the partially necrotized bone particles into the venous channels of the bone marrow and go directly to the lung. A similar mechanism may have been operative in this case since there may be extensive involvement of the bone by the Whipple's disease.

DR. STRICKLAND: The principal feature of this case was the extensive proliferation in virtually every tissue in the body of large numbers of macrophages which contain PAS positive material. Seiracki had demonstrated a distinctive sickle cell configuration of some of the discrete particles within the cytoplasm of some of these cells, a pathognomonic feature of this disorder. The etiology of Whipple's disease is obscure. However, the most logical theory so far proposed is that by Seiracki, who considers this disorder to be a proliferation of a metabolically aberrant strain of reticuloendothelial cell. This concept would put Whipple's disease in the category of reticuloendothelial storage diseases.

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BRITISH LIKE PRIVATE MEDICINE

BRITISH NATIONAL HEALTH SERVICE is going "downhill and pretty fast," according to noted British journalist, Colm Brogan . . . the number of people in private plans has risen 1,000 per cent . . . the rise is so fast plans are almost overwhelmed. . . . "Socialist medicine is just not good enough. People want personal care."

President's Page



WILLIAM O. VAUGHAN,
M.D.

Medicine is not only a major subject in the political arena, but the art and science of medicine is receiving a big play in newspapers throughout our nation, on radio and over television. Good relations between physicians and newspapers and other media reaching large segments of the public is of great importance. The accuracy of news and medical science information is dependent upon the relations which physicians and medical societies maintain with the press and other media.

Good relations with the communications profession is a must for every physician and especially every county medical society. This relationship can only be maintained when representatives of newspapers, radio and television, and members of the medical profession mutually agree upon certain responsibilities involving all parties.

When cooperation and understanding exists, good public relations in the form of accurate reporting will result. When these factors are not present, we often receive criticism for our system of medical care, thus doing an injustice to the public as well as damaging the profession and individual physicians.

For too many years, releasing medical stories to the press resulted in condemnation of physicians as unethical practice. To clarify this matter, the section of the medical code of ethics dealing with the relationship of the physician to media of public information has been revised. The Code of Ethics now stresses that it is the responsibility of the physician and the medical society to see that accurate information reaches the public.

In Tennessee, a "Guide to Cooperation" for physicians, hospitals and news media is available and copies can be obtained through TSMA headquarters.

Our county medical societies should be prepared to release significant news and information concerning the election of officers within the society and the naming of committees. Appropriate officers of the medical societies should notify the news media of the dates on which meetings are to be held. When scientific reports are to be given to the public, such reports should be cleared to insure that they are in language readily understood. An officer of the society should be available to answer any questions a reporter may have relative to reports.

It is recommended that a committee should be appointed by the medical society, charged with the function of interpreting the attitudes of the society and medicine to the public on scientific matters which it deems to be of importance.

The entire purpose of the guide is to promote understanding and cooperative action between the health profession and those who report medical news. All of us might re-examine the approach that we follow relative to dealing with news media, whether individually or of the medical society of which we are members. These are momentous days when we not only must practice the best possible medicine, but to also seek good public acceptance. The medical profession as a whole is under the gun and is the direct target of proposals that at best would drive deep inroads into that free way of life we all cherish.

President

A handwritten signature in dark ink, reading "W. O. Vaughan". The signature is fluid and cursive, with a large, stylized "V" at the end.

President

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Address papers, discussions and scientific matter to R. H.
Kampmeier, M.D., Editor and Secretary, 8210 Vanderbilt
University Hospital, Nashville 12, Tennessee
Address organizational matters to Jack E. Ballentine,
Executive Director, 112 Louise Avenue, Nashville 5, Tenn.

R. H. KAMPMEIER, M.D., Editor and Secretary
Vanderbilt University Hospital, Nashville

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September, 1961

EDITORIAL

PSYCHIATRIC CONSEQUENCES OF GASTRECTOMY

Mental disturbances after surgical operation are fairly frequent and in most cases short-lived. Their clinical characteristics have been described in a number of papers as postoperative psychoses and they are well recognized by both the psychiatrist and the surgeon. The long-time results on the psyche of surgery are less well understood. Since most patients are seen postoperatively by the surgeon and not the psychiatrist, neurotic disturbances may go unrecognized. The acute postoperative psychosis is classical, but unless specific questions are asked in the follow-up interview of the surgical patient, neurotic symptoms of even a severe degree may be missed.

The woman who dates the onset of her multitude of neurotic symptoms to a hysterectomy is not unusual and every orthopedist dreads surgery for back pain in the

emotionally inadequate patient, since the discomfort in the back may actually increase following operation in such individuals. It is, therefore, surprising that adequate study of the patient's psyche after gastrectomy has not been reported until recently. Whitlock, in the British Medical Journal, describes a group of patients on a psychiatric ward who have had previous gastrectomy for peptic ulcer. In this small group of 25 patients over 50% were admitted for alcoholism and drug addiction. Emotional instability is a not uncommon finding in the patient with duodenal ulceration, and all of these patients with alcoholism and drug addiction had had surgery for duodenal disease. They stated that they obtained relief of the dumping syndrome by using alcohol and drugs. Since many patients learn to live with the dumping syndrome without reliance on drugs, this is certainly not an adequate explanation of this dependence.

One wonders whether organic illness has not protected many of these persons from a more serious underlying breakdown, and when the psychosomatic disorder is treated successfully the breakdown occurs. No longer having the ulcer, drink and drugs are the only methods of escape left to the patient.

The physician advising the patient with a duodenal ulcer, therefore, is faced with a dilemma. Whitlock expresses the problem and its solution well. "Faced by a patient with a duodenal ulcer who is known to be a moderate drinker and who has had a number of acute complications of his ulcer, the surgeon must choose whether or not to operate. If he does not do so he may endanger the life of his patient. If he carries out a partial gastrectomy he might convert a reasonably adjusted individual into a chronic alcoholic, incapable of work, a burden to himself and his family alike. A warning about the possible effects of drinking after operation should be given, and if the patient is obviously drinking to excess he should be referred for psychiatric help. Undue preoccupation with dumping symptoms, persistent loss of or failure to regain weight, and repeated requests for potentially habit-forming drugs should all be regarded as warning signals indicating that the patient

might be heading for a breakdown or addiction."

Early postoperative recognition of certain symptoms should alert the surgeon quickly to obtain help from his psychiatric colleagues.

A. B. S.

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MEDICOLEGAL FORMS

This comment is in essence a book review. However, the timeliness of a publication by the American Medical Association is such that it seems the Editor's duty to bring it to the attention of the members of our State Association.

The title of the 50-page book is *Medicolegal Forms with Legal Analysis*, published by the Law Department of the A.M.A. Never in the history of this country has there been such frequency in suits pressed against doctors and hospitals. And never before have doctors so needed to anticipate possible suit and hedge their thinking thereby. Their actions not infrequently have needed to be guided not so much by the welfare of the patient but rather by the potential of medicolegal action. Your Editor has been told by friends that in certain areas of this country medical care may not be what it should be because of the fear of malpractice suits.

The American Medical Association has offered advice and suggestions relative to medicolegal matters in this book. Eighteen topics are discussed with, for each instance, one or more legal instruments or documents to be drawn up to cover certain circumstances of practice. The first half dozen or so of topics deal with physician-patient relationships, dealing with confidential information, the rights of privacy and items dealing with a physician's withdrawal from a case after a contractual relationship has been set up by attendance upon the patient. Also, the use of a substitute physician comes under scrutiny. Examples are given of the type of letter to be written to cover these circumstances.

As may be imagined the section dealing with treatment occupies a large part of the

discussion, some 30 pages. The topics in this section take up matters of liability for unauthorized treatment which includes extension of an operation beyond that planned and consented to by the patient or other responsible person. There is thorough consideration of what is implied in "informed consent" beyond the usual "consent to treatment." Limitation in treatment, and treatment of minors and incompetents is outlined from the legal viewpoint. "Warranties as to the results of treatment" provides an interesting discussion as does the one on "sterilization." In the section on treatment one-third of the space is given over to the legal documents to be used in anticipated operations of various types, consent to treatment, use of drugs under clinical investigation, consent to shock and radiation therapy, the use of diagnostic procedures, blood transfusions, etc.

Artificial insemination with its host of possible legal complications, as well as autopsies, are included in the discussions of this booklet. The consent needed and restrictions to the making and use of photographs of the patient, making of movies of operations, and television of operations all have important legal aspects.

It is without question that every doctor in Tennessee has at some time been guilty of an infraction of the law as described in "*Medicolegal Forms With Legal Analysis*." This is said not with the implication of such action representing malfeasance, and more often than not done for the good of the patient in the judgment of the attending physician. The point is that with each year the doctor is becoming less secure in standing on his own good judgment and experience as a result of the pandemic of malpractice suits in this country. Tennessee has not been caught in this pandemic as have the coastal states, both Eastern and Western or the urban centers of the Middle-West. But it will be only a matter of time until the sporadic suits of today become epidemic.

Wonderful advice is available to members of the State Association at the cost of a 4-cent stamp and the time it takes to make a request to the A.M.A. for a copy of this book. (It is available to hospitals at a nominal cost.)

R. H. K.

Special Item

Summary of 110th AMA Meeting

Like most meetings of the House of Delegates of the Tennessee State Medical Association, the delegates to the 110th annual meeting of the American Medical Association, June 25-30, 1961, at New York City, set a new record by action on 115 resolutions and 28 reports.

This growing volume, among other things, indicates the American doctor's increasing concern over a variety of matters revolving around the health care of the people of the United States; the maintenance of quality care while shielding the public against the inherent dangers in changing the control of the type and quality of care from the individual physician to a bureaucracy.

Principal actions at the AMA meeting were as follows:

- Dr. George M. Fister of Ogden, Utah, member of the AMA Board of Trustees and previously a member of the House of Delegates, was named President-Elect of the Association. Doctor Fister will become President at the June, 1962, annual meeting in Chicago, succeeding Doctor Leonard W. Larson of Bismarck, North Dakota, who assumed office at the Tuesday night inaugural ceremony in New York.

- The AMA 1961 Distinguished Service Award was voted to Doctor Walter H. Judd of Minneapolis, physician and member of Congress, for his contributions as a medical missionary, humanitarian and statesman devoted to world peace.

- *Osteopathy.* In considering a report of the Judicial Council and three resolutions on the subject of osteopathy, the House of Delegates agreed with the intent of the report and resolutions.

See August JOURNAL, pages 305-6.

- *Medical Discipline.* In a major move designed to strengthen the profession's disciplinary mechanisms, the House approved the conclusions and recommendations of the Medical Disciplinary Committee. One recommendation suggests that "The bylaws of the American Medical Association be changed to confer original jurisdiction on the Association to suspend or revoke the AMA membership of a physician guilty of a violation of the Principles of Medical Ethics

or the ethical policy of the American Medical Association regardless of whether action has been taken against him at local level."

For complete details, see pages 305-6, August JOURNAL.

- *Communications.* Action upon four resolutions related to the Association's public relations program, the House adopted a substitute resolution directing the Speaker of the House of Delegates to name seven elected members of the House as a special committee "to study and continually advise the Board of Trustees on the broad planning and coordination of all phases of communications of the American Medical Association, so that the public and the members of the medical profession are properly and adequately advised of the policies and concern of the medical profession with respect to all phases of medical care for all people."

- *Surgical Assistants.* In considering a Board report and two resolutions on the subject of surgical assistants, the House approved a set of principles which provided that . . . each AMA member is expected to observe the Principles of Ethics; that doctors should be paid for services personally rendered, but that referral alone does not constitute compensable service; that it is ethical for a surgeon to employ an assistant for a surgical procedure; and, that each physician involved in a case should bill separately (other than a regular, employed assistant).

The use of an employed assistant, whether he is the referring physician or on a per case or full-time basis, must not be used as a subterfuge to split fees or divide insurance benefits, the report said.

- *Other Actions.* Opposition to allowing the Food and Drug Administration to determine efficacy as well as safety of new drugs. . . . Approval of the creation of new two-year residency training programs in general practice. Such programs will provide for more experience in obstetrics and surgery. . . . Creation of a Commission to Coordinate the Relationships of Medicine and Allied Health Professions and Services. . . . Adoption of a report calling for the transition of emphasis from Salk vaccine to oral poliomyelitis vaccine. . . . Final approval of a \$20/year dues increase; \$10 on January 1, 1962, and \$10 additional on January 1, 1963.

PROGRAMS AND NEWS OF MEDICAL SOCIETIES

Memphis-Shelby County Medical Society

The Society met on June 6 at the Institute of Pathology. The House of Delegates meeting followed the scientific program.

Dr. J. J. McCaughan, Jr. spoke on the subject "Recent Trends in Treatment of Bleeding Peptic Ulcer." Dr. Ralph F. Bowers discussed "Management of Bleeding Peptic Ulcer." Both physicians are on the staff of Kennedy Veterans Hospital.

Chattanooga-Hamilton County Medical Society

Dr. Edward R. Annis of Miami, Florida, a nationally known physician, was the guest speaker at a buffet supper for the society on August 8th at the Fairyland Club. Dr. Annis spoke on social security coverage for medical care of the aged.

Dr. Augustus McCravey, President, presided. Dr. Wm. J. Sheridan, president-elect of TSMA, acted as toastmaster and introduced the guest speaker. Physicians of the Chattanooga-Hamilton County Medical Society and the surrounding area including Georgia and Alabama were in attendance. Approximately 500 physicians and their wives heard Dr. Annis speak.

At the meeting of the society on August 1st, held in the Interstate Building, the scientific program presented was as follows: "Bronchiectasis" by Dr. L. Spires Whitaker; and "Report and Presentation of Patient—Severe Hand Injury" by Dr. Wm. J. Sheridan.

Knoxville Academy of Medicine

The Knoxville Academy of Medicine was host at a dinner meeting for doctors, their wives and representatives from the public to hear Dr. Edward R. Annis of Miami who spoke to the group in opposition to socialized medicine. The meeting was conducted on July 19th at the C'est Bon Club.

McMinn County Medical Society

The annual picnic of the McMinn-Monroe County Medical Society was held recently at the home of Dr. J. E. Young in Sweetwater. A number of the members and their

wives enjoyed the picnic served on the lawn.

NATIONAL NEWS

The Month in Washington (From the Washington Office AMA)

The American Medical Association cited more than 50 reasons why the vast majority of the nation's physicians believe the Administration's medical care program would be "bad medicine for the people of this country."

The AMA's objections to the proposal were spelled out in a detailed, 91-page printed statement presented to the House Ways and Means Committee by Dr. Leonard W. Larson, Bismarck, N. D., president of the AMA.

The committee held two weeks of hearings (July 24-Aug. 5) on the administration proposal (H.R. 4222) which would provide limited hospitalization, nursing home care and outpatient diagnostic services for social security recipients. The program would be financed by an increase in payroll taxes on workers, employers and the self-employed.

Dr. Larson declared that the Administration program would force upon Americans a system of health care in which the quality of medical care would deteriorate, in which quality would become secondary to cost.

He said American medicine is the best in the world, medical education unsurpassed and the qualifications of U. S. physicians unmatched.

"Ours is a dynamic system of health care—and it works," he said. "The very fact that we now have 16½ million Americans 65 years of age and older proves that it works."

"Yet, this same system of medical care is now under attack. At a moment when American medicine is pre-eminent throughout the world, it is proposed that we adopt the very systems under which one European nation after another has lost its former leadership in medical science."

"The staggering costs of such plans, the administrative problems they create—let these considerations be secondary," he said. "The important thing is to see, at close

range, the disruption of the doctor-patient relationship; the delays in admission to hospitals; the time wasted in the over-crowded offices of doctors; the effect of the program on medical research; the availability of medical facilities and personnel—in other words, medicine in action on a government-run, assembly-line basis.”

Dr. Larson said also:

1. Congress is being asked to plunge into a compulsory government-operated program of health care for certain of the country's elderly without knowing what even the first-year cost will be—whether \$1 billion or \$4 billion—and without any clear idea of the extent of the problem it seeks to solve.

2. The bill under consideration would give a single government official the power to “become the nation's czar of hospital care.”

3. Contrary to statements of supporters of the measure that physicians' services are not included in the program, more than 50,000 doctors would be directly affected by regulations and controls exercised by government over operations and administration of hospitals.

4. Enactment of the program would “lower the quality of medical care available to the older people of the United States” because “it would introduce into our system of freely practiced medicine elements of compulsion, regulation and control” by government.

5. The Administration proposal is unnecessary in light of the true economic status of the aged and because of the spectacular rise of voluntary, private health insurance coupled with passage by Congress of the Kerr-Mills Medical Aid for the Aged Law last year and the existence of other public and private programs of aid to the needy.

6. Health care at the expense of the working people would be provided for millions who are financially able to pay for their own care.

7. The legislation “proposes that we distrust the brains and capacities of today's Americans” because “it suggests that the aged—as an entire group—are not capable of looking after their own affairs and providing for their own needs.”

8. Increasing costs of the program could impose such a financial strain on social security that the entire system could be jeopardized.

9. The Administration's bill is just as objectionable as the five similar health care proposals rejected by Congress since 1942.

10. The bill would violate “American ideals of independence, self-sufficiency and personal responsibility” by establishing a system in which medical aid would be provided not on the basis of need but on the basis of age.

Dr. Larson described estimates of the cost of the Administration program as “confusing.”

The AMA president reminded committee members that HEW Secretary Abraham Ribicoff had told them that “a closer study” had revealed it would be necessary to increase the taxable wage base from the present \$4,800 to \$5,200, rather than the \$5,000 fixed in the bill when it was introduced.

He also pointed out that HEW originally had said nursing home services during the first year of operation of the Administration scheme would cost \$9 million.

But in May, Dr. Larson said, HEW officials reported the figure as “unrealistically low” and lifted it to “somewhere between \$25 million and \$255 million.”

“Obviously this estimate is something less than precise,” Dr. Larson said.

The AMA president said that supporters of the Administration proposal have built their case on five false premises: (1) that the sociological problems of older people can be solved through legislation; (2) that most, if not all, of the aged are in poor health; (3) that most, if not all, of the aged are verging on bankruptcy; (4) that the problem of the aged in financing their health costs will get worse before it gets better, and (5) that voluntary health insurance and prepayment plans, private effort and existing law will not do the job that needs doing.

New Medical Licenses Increased in 1960 Fewer First Licenses, Smaller Net Gain

In 1960, for the ninth consecutive year, there was a slight increase in the number of new medical licenses issued in this country. During the year approximately 16,211

physicians were registered, compared with 16,068 in 1959.

These figures were released in the annual report of the Council on Medical Education and Hospitals of American Hospital Association.

Of the 16,211 who received new licenses, 8,030 physicians received their first licenses, a decline of 239 from the 8,269 issued in 1959.

Since about 3,700 physicians died last year, there was a net gain of 4,330 in the physician population in 1960. This was a smaller net gain than the 4,769 physician increase in 1959.

During 1960, California issued the largest number with 2,427. New York issued 1,572 while more than 500 were registered in the following states—Florida, Illinois, Michigan, New Jersey, Ohio, Pennsylvania, Texas and Virginia.

Only 3.3 per cent of the 5,502 graduates of approved medical schools failed to pass the 1960 examinations. Sixteen approved medical schools in the United States and three in Canada had no failures among their graduates.

House Ways and Means Committee Hearings Completed

Hearings on H.R. 4222 have been completed. It is highly unlikely that there will be any vote on the proposal this year. This does not mean that the fight is over. Proponents of H.R. 4222 for social security coverage for medical care of the aged will seek to bring election-year pressure upon congressmen in 1962 to get them to back the measure. The medical profession and its allies will again have to make an alert all-out effort if they expect to win in the next session of Congress.

H.R. 10—Tax Exemption

H.R. 10 which would grant tax exemption to self-employed persons to set up their own pension plans, ran into stiff opposition during the hearings before the Senate Finance Committee. In the face of this opposition, Representative Eugene Keogh (D., N.Y.), chief sponsor of the bill agreed to cut in half the proposed tax deferralment as a compromise to gain Senate acceptance. However, Senator Albert Gore of Tennessee con-

tinued to oppose the measure as one granting a special tax privilege.

MEDICAL NEWS IN TENNESSEE

Licensing Board for the Healing Arts Suspends Licenses of Two Doctors

On July 19th, the State Licensing Board for the Healing Arts suspended the licenses of two Tennessee doctors to practice medicine.

Dr. R. H. Hutcheson, State Commissioner of Public Health and Chairman of the Board, said the licenses of Dr. Billy W. Douglas of Watertown, and Dr. Herbert G. Giddens, Huntingdon were revoked. Dr. Douglas' license was suspended for six months and he was placed on probation for five years. The license of Dr. Herbert G. Giddens was suspended for 30 days, effective last August 1st.

Both doctors were charged specifically with "immoral, unprofessional or dishonorable conduct" under statutes governing the practice of medicine.

Hawkins County Hospital Opens

The Hawkins County Memorial Hospital was opened to patients on July 17th. The million-dollar structure contains 53 beds and will have an active staff of ten physicians and fourteen courtesy staff members.

TSMA Auxiliary Wins Trophy for Second Consecutive Year

The Woman's Auxiliary to the Tennessee State Medical Association has won the Ethel Gastineau Trophy for the second consecutive year. This is the highest recognition for efforts on behalf of the American Medical Education Foundation that can be obtained. The trophy is awarded annually to the state doing most for AMEF. The presentation is made on a four point basis: (1) the greatest per capita contribution (2) the largest total amount given (3) the greatest amount of increase in contributions over the previous year and (4) the greatest percentage of increase over last year. The Auxiliary donated \$10,051.19 to AMEF in the 1960-61 year.

American Board of Abdominal Surgery

A number of Tennessee physicians have been interested in the American Board of Abdominal Surgery and numerous questions have come to the Association concerning this board.

On June 27, 1961, the Section on General Surgery of the American Medical Association voted and adopted to sponsor the American Board of Abdominal Surgery to the Advisory Board for Medical Specialties. Following are the two resolves contained in the resolution adopted:

"Resolved, That the Section on General Surgery of the American Medical Association hereby sponsor the American Board of Abdominal Surgery to the Advisory Board for Medical Specialties, and be it further

"Resolved, That the officers of the Section on General Surgery are hereby instructed to notify the American Board of Abdominal Surgery, in writing, of such sponsorship, and further instructed to render all possible assistance to the American Board of Abdominal Surgery in its negotiations for approval by the Advisory Board for Medical Specialties and also for the approval by the Council on Medical Education and Hospitals of the American Medical Association."

South Averages Fewer Illnesses

The Health Insurance Institute, in an analysis from the data from the U. S. Public Health Service, has reported that on the average the person in the South has fewer acute illnesses than the residents in any other region, while the average person who lives in the West not only leads in such conditions, but suffers more restricted activity and bed confinement as a result of them.

Since Tennessee falls into the southern region, it should be of particular interest to Tennessee physicians.

On a regional basis, the Institute said the average Southerner had 1.9 acute conditions per year, compared to 2.1 conditions per person in the Midwest, 2.2 per person in the Northeast, and 2.5 per person in the West.

Meharry Medical College

The federal government has awarded Meharry Medical College \$400,000 to train pathologists over a five-year period.

Twelve interns will be selected for the program. These will be graduates of Meharry and other medical colleges with most of them to be from Meharry. Part of the funds will be used as grants to the interns, while other portions of the fund will pay for the addition of three professors in pathology and purchase supplies.

In terms of overall benefits, this program will provide better medical service to the public.

Vanderbilt University School of Medicine

Vanderbilt University Hospital has announced plans for a \$400,000 addition to its clinical Research Center. The two-story addition, to be constructed atop the present southeast wing of the hospital, will contain supporting laboratories for the present clinical physiology labs. The supporting laboratories will be used for continuing and expanding research in hematology, endocrinology, physical chemistry, cardiovascular and neurology projects.



Grants of \$35,860 have been awarded for research in the field of heart and related diseases. The Life Insurance Medical Research Fund has announced a grant of \$30,360 for the support of research by Dr. Howard E. Morgan on regulation of glucose phosphorylation and glycogenolysis in the heart muscle. A \$5,500 grant has been awarded to support research by Dr. John G. Coniglio on dietary factors influencing the disposition of orally administered labeled cholesterol.



The National Foundation has announced two grants totaling \$95,248 for the University's Polio and Birth defects centers. The funds will be used to conduct clinical research to improve severely involved polio patients including respiratory paralysis; to conduct a teaching program in polio treatment techniques and provide exemplary patient care. Total grants for the local polio center since 1954 have amounted to \$405,543.

University of Tennessee College of Medicine

A \$14,140 grant to study methods for early detection of glaucoma has been

awarded to two faculty members by the U. S. Public Health Service. The grant was made to Dr. Henry Packer, chief of the division of preventive medicine, and to Dr. Alice R. Deutsch, associate professor of ophthalmology.

The Public Health Service also has made more than \$2,500 worth of equipment available to the eye clinic of the City of Memphis Hospitals out-patient department to implement the study.

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A total of 572 physicians and other members of the health services from 32 states and Canada attended 26 postgraduate programs offered by the University of Tennessee medical units during the fiscal year July 1, 1960 and ending June 30, 1961. The number attending represents an increase of 35 over the previous fiscal year.

Of the 572 attending, 273 were from Tennessee, followed by 83 from Arkansas and 68 from Mississippi.

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Dr. Edward McCall Priest has been named instructor in Medicine.

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A special committee is studying the possibility of lengthening requirements for the degree at the University of Tennessee College of Medicine. Dr. M. K. Callison said the present three years and three months of study required for medical degrees may be extended. He said a curriculum committee is studying the problem because the body of medical knowledge is expanding rapidly.

Memphis Plans New Radiology Building

The city of Memphis has announced plans to build a \$5 million radiology research and service building adjacent to the University of Tennessee medical units.

It was reported that the University of Tennessee is providing \$400,000 towards construction of the radiology research section. Application has been made to the State Department of Public Health for a \$220,000 grant.

Spokesmen pointed out that the project would eliminate an overcrowded emergency room, provide needed rooms for animal research and permit a variety of treatments with radioactive cobalt, iodine and other dangerous elements.

PERSONAL NEWS

The American College of Chest Physicians at its recent meeting in New York City, conferred Fellowship certificates upon 204 physicians. Tennesseans receiving certificates included **Dr. G. Daniel Copeland**, **Dr. Charles B. McCall**, and **Dr. I. Frank Tullis**, all of Memphis.

Dr. J. Harvill Hite, Jr., formerly of Pulaski and Vice President of the Tennessee State Medical Association for Middle Tennessee, has moved to Pueblo, Colorado, where he is in the general practice of medicine.

Appointed as chief of the various services at St. Mary's Hospital, Humboldt, are the following physicians: **Dr. E. C. Crafton**, chief of medical services; **Dr. James W. Hall**, chief of surgery; and **Dr. Charles W. Davis**, chief of obstetrical services.

Dr. Darrell Mullins and **Dr. John Overall**, formerly of Nashville, have joined the staff of Benton-Clinic Hospital at Camden.

Dr. Harry Wynn Hollingsworth, formerly of Tampa, Florida, has been appointed to head the medical program at the Chattanooga Division of Combustion Engineering.

Dr. Joseph W. Johnson, Jr., Chattanooga, recently addressed the Actuarial Club of Chattanooga. His topic was "Projection as Protection."

Dr. T. R. Ray, Shelbyville, has been appointed to the Tennessee Public Health Council for a three-year term.

Dr. C. D. Wilder, Paris, has moved to Sarasota, Florida.

Dr. Millard F. Perrin has announced the opening of his office for the practice of pediatrics and pediatric cardiology in the Doctors Building in Chattanooga.

Dr. Coulter S. Young, Manchester, has been elected chairman of the Manchester Planning and Industrial Commission.

Dr. James C. Bradshaw has joined the staff of McFarland Hospital in Lebanon.

Dr. H. L. Monroe, Erwin, recently participated in a panel program presented to the Civitan Club.

Dr. Elbert C. Cunningham, formerly of Carthage, has moved to Harriman where he will be in the practice of medicine.

Dr. Roy W. Epperson, Athens, has been elected the eminent grand commander of Knights Templar.

Dr. W. Rutledge Miller, Johnson City, recently addressed the Erwin Kiwanis Club.

Dr. Elmer T. Pearson, Elizabethton, has been elected chief of staff of physicians at Carter County Memorial Hospital. The outgoing chief is **Dr. W. G. Frost**. **Dr. Royce Holsey** is vice-chief and **Dr. David Slagle** is secretary of the group.

Dr. Samuel S. Binder, Chattanooga, has announced the transfer of his offices for the practice of obstetrics and gynecology to the Isbell Clinic Building, 535 McCallie Avenue.

Dr. Maurice Lowry, Lexington, has been elected

chief of staff at Lexington-Henderson County Hospital. He succeeds **Dr. Warren C. Ramer**. **Dr. Jack Stripling** was named vice chief and **Dr. Cornelia Huntsman**, secretary.

Dr. R. H. Hutcheson, Franklin, Commissioner of Public Health for Tennessee, made the principal address at the dedication of Wilcox Hall in Kingsport.

Dr. Robert Allen, Cleveland, has opened his office for the practice of internal medicine. He is a native of Spartanburg, South Carolina.

Dr. John Hickey, Sevierville, has been named Sevier County's first medical examiner.

Dr. Fred Hooper, Harriman, has been elected county medical examiner in Roane County.

Dr. J. B. Havron, South Pittsburg, has been appointed to the board of Mayor and Commissioners.

Dr. Albert H. Fick, Humboldt, has been elected medical examiner for Gibson County.

Dr. Marion J. Murray, Jr., Bristol, has entered practice in that city and is associated with **Dr. William H. Johnson**. He specializes in pediatrics.

Dr. Hugh J. Morgan, Nashville, has been named to the National Advisory Committee on the Selection of Physicians, Dentists and Allied Specialists.

Dr. Donald Pinkel, formerly of Buffalo, New York, has been appointed director of medical research for St. Jude Hospital in Memphis.

The following Chattanooga physicians participated recently on radio and TV programs in that city. The physicians and their subjects were: **Dr. Nat H. Swann, Jr.**, "Dietary Fat—Its Relation to Heart Attacks and Strokes"; **Dr. Frank Brannen**, "The Shortage of Nurses in Nursing Specialties"; **Drs. James Hedden, Lewis H. Schmidt and Joseph H. Stickley**, "The Significance of Rectal Bleeding"; **Dr. Minnie R. Vance**, "Pre-School Check-Ups and Immunizations"; and **Dr. Foster Hampton, Jr.**, "A Re-Evaluation of the TB Situation."

"Medical Care for the Aging" was the subject presented over the program "Jaycee Question of the Week" by **Dr. Harry Stone**, Chattanooga.

Dr. John Hooper Griscom has become associated with **Dr. Frederic Tremaine Billings, Jr.**, Nashville, in the practice of Internal Medicine.

Dr. Melvin W. Deweese has joined Doctors **Ralph O. Rychener, Roland Myers, Richard Miller** and **William Murrah** in the practice of ophthalmology in Memphis.

Dr. John M. Wampler has joined **Dr. John R. Glover**, Nashville, in the practice of orthopaedic surgery.

The conference is scheduled for Sunday, October 8, at Cape Girardeau. All sessions will be held at the Colonial Tavern Restaurant. Registration for the conference will start at 12:30 p.m. and the first session will get under way at 1:30.

Guest speakers of the conference include: **Nylene Eckles, M.D.**, University of Minnesota, speaking on "Treatment of Advanced Breast Cancer Patients"; **Clifton D. Howe, M.D.**, University of Texas M.D. Anderson Hospital, "New Advances in Chemotherapy"; **Danely P. Slaughter, M.D.**, University of Illinois College of Medicine, "Cancer of the Head and Neck"; and **Alexander R. Margulis, M.D.**, "New Method of Examining the Rectal Sigmoid Colon for Malignancy."

The conference is sponsored by the American Cancer Society, the Missouri State Medical Association, the American Academy of General Practice, and the Cape Girardeau County Medical Society.

Postgraduate Courses at the Medical College of Georgia

Five intensive postgraduate courses patterned for the practitioner are planned for the fall and winter 1961-62 at the Medical College of Georgia, Augusta, Georgia. Featured faculty will include nationally known figures as: **Dr. Ralph V. Platou**, Professor of Pediatrics and Head of the Department of Pediatrics, Tulane School of Medicine, New Orleans, La.; **Dr. Louis A. Goldstein**, Associate Professor of Surgery (Orthopedics), University of Rochester School of Medicine, Rochester, New York, and **Dr. Darius Flinchum**, Instructor in Surgery, The School of Medicine, Emory University, Atlanta, Georgia; **Dr. Michael Newton**, Professor and Chairman, Dept. of Ob-Gyn, University of Mississippi Medical Center, Jackson, Miss.; **Dr. Harold D. Levine**, Peter Bent Brigham Hospital, Boston, Mass.; **Dr. Champ Lyons**, Prof. and Chairman, Dept. of Surgery, Medical College of Ala., Birmingham, Alabama.

Advances in Pediatric Diagnosis and Treatment, October 31—November 2, 1961; Fractures in General Practice, November 14-16, 1961; Obstetric Problems in Private Practice, Jan. 23-25, 1962; Cardiac Emergencies, February 13-15, 1962; and Pre- and Postoperative Care, March 20-22, 1962. The courses will be supplemented by members of the faculty of the Medical College of Georgia.

Each course is acceptable for 18 hours of credit by the American Academy of General Practice and registration is limited to a small group for close participant-faculty communication. Registration fee is \$50 for each session. Application may be made by contacting **Dr. Claude-Starr Wright**, Director, Department of Continuing Education, Medical College of Georgia, Augusta, Georgia.

Postgraduate Courses at the University of Tennessee

The College of Medicine offers two courses in October:

ANNOUNCEMENTS

Southeast Missouri Cancer Conference

The program of the Eighth Annual Southeast Missouri Cancer Conference has been arranged and invitations have been issued to physicians in Southeastern and Southwestern states, including Tennessee.

A five-day course in Radiology is scheduled for October 9-13, and is limited to four physicians.

A course in Obstetrics and Gynecology will be given October 18, 19 and 20. Tuition fee is \$60.00.

Kentucky Postgraduate Courses

Courses scheduled for the fall are the following:

October 5—Obstetrics, at Paducah Kentucky.

October 5-December 21, X-ray Interpretation, Louisville General Hospital, Thursday nights, Louisville.

October 19—Recent Advances in Therapeutics, Pikeville.

November 16—Clinical Neurology, Louisville General Hospital, Louisville.

December 14—Norton Memorial Infirmary Seminar, Louisville.

For further information address: Postgraduate Medical Education Office, 104 W. Chestnut Street, Louisville 2, Ky.

Postgraduate Course in Cancer Chemotherapy

The Department of Surgery of Emory University will present the course at Emory University Hospital, October 19 and 20.

In addition to the faculty members of Emory University, the following guests will participate: Dr. Warren H. Cole, Professor of Surgery, University of Illinois, Chicago; Dr. Robert K. Ausman, Associate Director, Roswell Park Memorial Institute, Buffalo; Dr. Robert Sullivan, Director of Cancer Chemotherapy, Lahey Clinic, Boston; and Dr. Julius Wolf, Chief of Medicine, Bronx V.A. Hospital, Bronx, New York.

Those interested may obtain information by writing Box 459, Emory University, Atlanta 22, Georgia.

Special Letter

TO: DOCTORS OF MEDICINE IN TENNESSEE
RE: CANCER DIAGNOSTIC CLINICS

Dear Doctors:

Enclosed herewith is a list of the cooperative cancer clinics in Tennessee. Medically indigent patients may be referred to any one of these clinics. Form No. 576 "Request for Diagnostic Service" should be used in referring patients. Copies of this form may be obtained on request from this office or from the local health departments.

Sincerely yours,
R. H. HUTCHESON, M.D.
Commissioner, State of
Tennessee Department of
Public Health



COOPERATIVE CANCER CLINICS IN TENNESSEE 1961-1962

MEMPHIS

West Tennessee Cancer Clinic
787 Jefferson Avenue
Memphis, Tennessee

*Time: Monday, Tuesday, Thursday, and Friday
Hour: 8:00 A.M.

*Doctors should mail in to the clinic requests for service, thereby establishing definite appointments for the patients.

NASHVILLE

Vanderbilt University Hospital Cancer Clinic
Twenty-First Avenue South
Nashville, Tennessee

Monday, 8:00 A.M., Chest

Monday, 1:00 P.M., Neurosurgery

Tuesday, 8:00 A.M., Hematology

Wednesday, 1:00 P.M., E.N.T.

Thursday, 9:00 AM, Gynecology, Surgery
Hubbard Hospital Tumor Clinic (Colored)

1005-18th Avenue, North

Nashville, Tennessee

Time: Monday and Thursday

Hour: 11:00 A.M.

Nashville General Hospital Tumor Clinic
Hermitage Avenue

Nashville, Tennessee

*Time: Tuesday, 12-30-6:00 P.M., Surgery

Friday, 9:30 A.M.-12:30 P.M. Gynecology

*Patients are seen by appointment only.

CHATTANOOGA

Chattanooga Tumor Clinic

Erlanger Hospital

Chattanooga, Tennessee

Time: Tuesday, 12:30 P.M.

Friday, 12:30 P.M.

KNOXVILLE

East Tennessee Tumor Clinic

University of Tennessee Memorial Hospital

Knoxville, Tennessee

Time: Thursday

Hours: 8:00 A.M.-10:00 A.M.—Dental

8:00 A.M.- 1:00 P.M.—Surgery

8:00 A.M.-10:00 A.M.—E.N.T.

8:00 A.M.-12:00 Noon—Dermatology

1:00 P.M.- 4:30 P.M.—Gynecology (Pa-
tient report at
12:00)

8:00 A.M.-10:00 A.M.—Hematology

JOHNSON CITY

Tri-County Cancer Clinic

Health Center, 102 West Myrtle

Johnson City, Tennessee

Time: Thursday

Hour: 1:00 P.M.

KINGSPORT

Holston Valley Community Hospital Cancer
Clinic

Time: Friday

Hour: 12:30 P.M.

BRISTOL

Bristol Memorial Hospital Cancer Clinic

Bristol, Tennessee

Time: Friday

Hour: 1:45 P.M.

JACKSON

Jackson-Madison County General Hospital
Cancer Clinic

Jackson, Tennessee

Time: Friday

Hours: 12:00 Noon-3:00 P.M.

PLACEMENT SERVICE

The Placement Service of the Tennessee State Medical Association is designed to assist doctors and communities to get together. Further information and contacts to both physicians and communities are available from the Public Service Office, 112 Louise Avenue, Nashville 5, Tennessee.

Locations Wanted

A 25 year old married physician would like to establish general practice in Tennessee community of 10,000-30,000, preferably west, but will consider other sections. Would be interested in either clinical or associate practice. Graduate of University of Tennessee School of Medicine. Baptist. Tennessee license. Available July 1962. LW-385

A 26 year old single general practitioner wishes to locate in middle or west Tennessee community of 5,000-10,000. Will consider clinical practice. Methodist. Graduate University of Tennessee School of Medicine. Available immediately. LW-386

A 35 year old married physician interested in locating in east or middle Tennessee community of 8,000-10,000 for the practice of internal medicine. Assistant, associate or institutional practice would be considered. Protestant. Graduate University of Colorado. Available immediately. LW-390

A 30 year old married physician interested in establishing practice of internal medicine in west or middle Tennessee community of 65,000 or over. Clinical, assistant or associate practice will be considered. Catholic. Graduate University of Cincinnati. Certificate Part I, American Board of Internal Medicine. Available immediately. LW-394

A 30 year old married general practitioner with residency in surgery would like clinical or associate practice in east of middle Tennessee community of 15,000 or over. Tennessee license. Methodist. Graduate University of Tennessee School of Medicine. Available immediately. LW-398

Surgeon, 31 years of age, graduate of University of Virginia School of Medicine, would like clinical, assistant, associate or group practice in east or middle Tennessee community of 10,000-50,000. One year medical residency, three years surgical residency. Available fall 1962. LW-399

A 37 year old married, general practitioner with training in thoracic surgery, would like to establish practice in east Tennessee community 30,000 or over. Group, clinical, associate or institutional practice will be considered. Graduate Yale University. Catholic. Extensive residency training. Available immediately. LW-402

A 36 year old married physician would like to establish clinical, assistant or associate practice in radiology in east Tennessee community 40,000-100,000. General diagnostic and therapy and isotopes training. Residency training. Board certified, Radiology Approved Isotopes. Presbyterian. Graduate University of Tennessee School of Medicine. Available immediately. LW-407

A 31 year old married physician would like to establish assistant, associate or solo practice in Ob-Gyn, in Tennessee community of 15,000 and over. Methodist. Graduate Ohio State University School of Medicine. Residency training. Available August 1961. LW-408

A 28 year old married physician, completing residency training in pediatrics next year, would like to associate or assist in practice of pediatrics in east Tennessee community of over 10,000. Episcopalian. Graduate Medical College of Virginia. Available July 1962. LW-415

Physicians Wanted

Physician in east Tennessee community of 30,000 would like associate for general practice. Prefers physician with some surgical training. Office space and some equipment provided. PW-127

Northwest Tennessee community with trade area of over 3,000 in need of general practitioner. Office space available. Good hospital facilities, only sixteen miles. Near one of state's large recreational areas. Excellent location. PW-129

A rural, middle Tennessee community of 800 in need of general practitioner. No other physician in community. Office space available. Good hospital facilities nearby. Near good hunting and fishing area. PW-139

Small southern Tennessee community, near large industrial area in great need of physician. Hospital within 15 miles. Large local trade area. Excellent opportunity. PW-142

Physician in middle Tennessee town of 250,000 would like associate or independent internist or general practitioner to share office. Office space and equipment provided. PW-146

Physician in west Tennessee town of 500,000 needs associate in general practice. Completely furnished office available. PW-148

East Tennessee community of 1,000, with larger trade area, needs general practitioner to assist one other doctor in community. Office space and equipment will be provided to suit physician. Forty bed hospital located in community. PW-149

An Ob-Gyn needed for middle Tennessee community of over 15,000 to either assist or become associated with now practicing physician. Excellent opportunity. PW-161

General practitioner wanted, with interest in Ob, to assume practice in east Tennessee community with trade area from three counties. No other doctor in immediate area. Office equipment, including x-ray with fluoroscopy, may be had. PW-162

Completely furnished office, including x-ray equipment, in suburban area of large middle Tennessee city, available for immediate occupancy to one or two general practitioners wishing to establish joint practice. Excellent location. PW-163

TENNESSEE STATE MEDICAL ASSOCIATION 1961-1962 STANDING COMMITTEES

Committee on Scientific Work—R. H. Kampmeier, Chairman, Nashville; Wendell W. Wilson, Old Hickory; W. David Dunavant, Memphis; Henry B. Turner, Memphis; Boyer M. Brady, Jr., Memphis; Bruce E. Walls, Memphis; C. Harold Steffee, Memphis; Fred B. Ballard, Jr., Chattanooga; John H. Burkhart, Knoxville; Robert P. McBurney, Memphis.

Committee on Hospitals—Merlin L. Trumbull, Chairman, Memphis (1963); C. D. Hawkes, Memphis (1962); Harry T. Moore, Jr., Nashville (1962); Chester K. Jones, Jackson (1964); John W. Adams, Jr., Chattanooga (1964); James A. Burdette, Knoxville (1963); Thomas K. Young, Jr., Columbia (1964).

Legislative and Public Policy Committee—Douglas H. Riddell, Chairman, Nashville (1964); H. L. Monroe, Erwin (1962); Charles C. Smeltzer, Knoxville (1963); George K. Henshall, Chattanooga (1964); Sam Hay, Murfreesboro (1962); John U. Speer, Pulaski (1963); G. H. Berryhill, Jackson (1962); Byron O. Garner, Union City (1963); M. Beckett Howorth, Jr., Memphis (1964). (Appointed for One-year Terms)—Alvin J. Ingram, Memphis (1962); Perry J. Williamson, Knoxville (1962); Harry A. Stone, Chattanooga (1962); Daugh W. Smith, Nashville (1962); Chas. C. Trabue, IV, Nashville (1962); John K. Twilla, Smithville (1962); James T. Callis, Crossville (1962); R. H. Elder, Cedar Hill (1962); Carl C. Gardner, Jr., Columbia (1962); Addison B. Scoville, Jr., Nashville (1962); Thomas F. Frist, Nashville (1962); R. H. Kampmeier, Nashville (1962).

Liaison Committee to the Public Health Department—C. D. Hawkes, Chairman, Memphis (1965); Wm. A. Hensley, Cookeville (1966); Wm. A. Garrett, Cleveland (1962); John R. Thompson, Jr., Jackson (1963); Thomas S. Weaver, Nashville (1964).

Committee on Insurance—B. F. Byrd, Sr., Chairman, Nashville (1963); Edward D. Mitchell, Jr., Memphis (1962); George L. Inge, Knoxville (1964).

Symposium Committee on Postgraduate Education—Robert A. Davison, Chairman, Memphis; Harrison J. Shull, Nashville; E. Charles Siemknecht, Knoxville; Van Fletcher, Chattanooga; L. A. Killeffer, Harriman; Sam H. Hay, Murfreesboro; Henry T. Kirby-Smith, Sewanee; B. L. Pentecost, Memphis; Wm. A. Garrett, Cleveland; Julian K. Welch, Jr., Brownsville; J. T. Moore, Jr., Algood; Byron O. Garner, Union City; R. H. Harvey, Erwin; J. H. Hite, Jr., Pulaski; James W. Ellis, Nashville; Edward R. Atkinson, Clarksville; John R. Thompson, Jr., Jackson.

Committee on Memoirs—Henry L. Douglass, Chairman, Nashville (1962); A. M. Patterson, Chattanooga (1963); N. S. Shofner, Nashville (1961).

Committee on Prepaid Health Insurance—James A. Kirtley, Jr., Chairman, Nashville; Joseph W. Johnson, Jr., Chattanooga; Daugh W. Smith, Nashville; Jas. C. Gardner, Nashville; E. L. Caudill, Jr., Elizabethton; James J. Callaway, Nashville; Wm. A. Garrett, Cleveland; James N. Proffitt, Maryville; Greer Ricketson, Nashville; Harry T. Moore, Jr., Nashville; Luther A. Beazley, Nashville; J. Cash King, Memphis; Thomas F. Parrish, Nashville; W. T. Satterfield, Memphis; Wm. R. Bishop, Chattanooga; Fontaine B. Moore,

Jr., Memphis; Elgin P. Kintner, Maryville; B. K. Hibbett, III, Nashville; Robert N. Buchanan, Jr., Nashville; Mr. Clyde York, Columbia; Mr. Charles L. Cornelius, Sr., Nashville; R. H. Kampmeier, ex officio, Nashville. **Executive Sub-Committee**—James A. Kirtley, Jr., Chairman; Daugh W. Smith, Nashville; James J. Callaway, Nashville; Thomas F. Parrish, Nashville; Jas. C. Gardner, Nashville; B. K. Hibbett, III, Nashville; Mr. Charles L. Cornelius, Sr., Nashville; R. H. Kampmeier, ex officio, Nashville.

Committee on Cancer—R. R. Braund, Chairman, Memphis (1962); Ralph H. Monger, Knoxville (1964); Louis Rosenfeld, Nashville (1961); S. S. Marchbanks, Chattanooga (1962); Hollis E. Johnson, Nashville (1964); Walter D. Hankins, Johnson City (1963); G. Sydney McClellan, Nashville (1962).

Advisory Committee to the State Department of Public Welfare—Aubrey Harwell, Chairman, Nashville (1965); Carl A. Hartung, Chattanooga (1962); F. T. Billings, Jr., Nashville (1964); Harold J. Starr, Chattanooga (1966); Joseph J. Baker, Nashville (1966); Joseph W. Kyle, Memphis (1962); N. E. Hyder, Erwin, (1962); Royal G. Cravens, Crossville (1962); Herschel Penn, Knoxville (1962); Thomas F. Stevens, Knoxville (1962); Harwell Wilson, Memphis (1962); William Tyson, Memphis (1962).

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As life is extended for more and more of the population, the appearance of the elderly in the operating room becomes a commonplace. The author considers the physiologic state of the patient in advanced age as it influences anesthesia.

The Geriatric Patient—A Special Anesthetic Problem?*

C. R. STEPHEN, M.D.,† Durham, N. C.

"Any anesthetic or method, or combination of anesthetics and methods, that is serviceable and good at all, is serviceable and good for old people. The main difference is that these people are tender, are quieted easily with sedatives, are anesthetized and relaxed easily and overdosed readily. What they require particularly is conservatism with a little daring mixed in, but with increasing vigilance and nicety and exactness of administration and control."¹ These statements summarize in a nutshell the approach to the older age group, more and more of whom are being seen in operating rooms as the life span is extended. The geriatric patient is a special problem only to the point that the anesthesiologist is capable of assessing the alterations in the vital functions associated with advancing age.

Preoperative Assessment

Herein lies the crux of determining the proper anesthetic care of the patient above 60 years of age. With the natural process of aging, certain inherent changes occur in several organs of the body, many of which are related fundamentally to a loss of elasticity in the tissues. These inherent biologic alterations progress at different rates in different patients, and indeed in some organ systems more rapidly than in others in any one patient.

This progressive lack of resiliency, or reduction of reserve function, may for example be limited primarily to the respiratory system. Pulmonary emphysema, or chronic pulmonary fibrosis are progressive syndromes characterized by loss of the normal elasticity and turgor of the lung tissues. In emphysema the elastic tissues have become overstretched, with the result that the functional residual dead space is greatly enlarged, with a marked reduction in the vital capacity and therefore the respiratory reserve. Frequently there is added to this syndrome an element of bronchospasm secondary to an asthmatic condition. In the patient with pulmonary fibrosis, the respiratory reserve also is reduced, but in this case there is actually a shrinkage of the available alveoli for the exchange of oxygen and carbon dioxide. Often a chronic bronchitis is superimposed on either of these syndromes. Of the two conditions, the patient with pulmonary emphysema presents the greater anesthetic risk, because a degree of bronchospasm is more likely to be associated, and because the greater pulmonary artery pressure which develops with this condition is likely to create a cor pulmonale and thus reduce cardiac function.

The cardiovascular system may bear the brunt of the aging process. Varying degrees of generalized arteriosclerosis, coronary sclerosis, cerebral sclerosis and myocardial enlargement, all of which are secondary to an inadequacy of elastic tissue, may be present. The degree of arterial systolic hy-

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†From the Division of Anesthesia, Duke University Medical Center, Durham, N. C.

pertension is important only insofar as the heart muscle has been able to meet the increasing demands placed upon it; if the myocardium is not greatly enlarged by x-ray, and if there is minimal electrocardiographic evidence of ventricular ischemia, the systolic pressure is of secondary importance. Advanced cerebral arteriosclerosis with its associated ischemia of the brain is of particular concern when anesthesia is being considered—any type of general anesthesia is best avoided in these patients.

The danger of thrombo-embolism is enhanced in any patient with arteriosclerosis, and in the geriatric patient this type of complication is the commonest cause of postoperative mortality. The importance of early ambulation cannot be over-emphasized in these patients.

Renal disease is to be sought for particularly in the geriatric age group. The patient with renal insufficiency requires special care with regard to choice of drugs and fluid replacement during operation.

Certain acquired difficulties may complicate the care of the older patient. Because of the disease process, e.g. carcinoma, for which the patient is seeking help, there may have developed an associated malnutrition and blood volume deficit. It is often life-saving to attempt to correct electrolyte losses, restore protein balances, and improve blood volume in such patients before embarking on definitive surgical procedures. A smooth operative course and postoperative convalescence are aided markedly by taking the time to prepare the patient for the surgical interference.

Probably the most important means of evaluating a geriatric patient is by assessing his prior environment, and by listening in detail to the story of his daily routine before admission to hospital. Physical examination and laboratory investigations are obviously valuable, but a previously active octogenarian with a will to live is a better anesthetic risk than a semi-invalided, somewhat befuddled sexagenarian who has been cast aside by his immediate family. In the general approach to the problem, geriatric patients can be classified by observation into 4 general types.

(1) The thin, wiry, active, asthenic pa-

tient: he is a good anesthetic risk as a rule, and will withstand surgery well.

(2) The florid, obese, lethargic, dyspneic type: he is a poor anesthetic risk, and will have a much reduced respiratory and cardiac reserve.

(3) The pale, gaunt, tired, cachectic patient: he requires concentrated preoperative preparation, and even then withstands anesthesia and operation poorly.

(4) The acutely-ill presenting an emergency, as bleeding or intestinal obstruction: this patient requires all the art and ingenuity of the anesthesiologist.

It is of particular interest in the geriatric patient to inquire regarding the administration of antihypertensive drugs, corticosteroid compounds and ataractics. If the patient is receiving such drugs, their exact nature and dosage is of importance in determining the correct time for operation and the choice of anesthetic drugs.

Preoperative Medication

Overdosage of preoperative medication is seen frequently in geriatric patients. The basal metabolic rate is on the downgrade in these patients, and therefore in the dosages normally employed, drugs depressant to the central nervous system, especially narcotics, are prone to initiate hazardous reductions in respiratory and circulatory function. Preanesthetic sedation should be minimal, should avoid the use of narcotics unless the patient is in severe pain, and sometimes is best omitted completely. The action of phenothiazine compounds, even the relatively innocuous promethazine (Phenergan) is unpredictable in old people, and they should not be employed. The anticholinergic drug scopolamine likewise may produce disorientation. When such drugs are indicated, and they should not be given prior to regional or spinal analgesia, atropine is the best choice. Chloral hydrate has been recommended for premedication. Probably the most satisfactory sedation is one of the short-acting barbiturate compounds, secobarbital or pentobarbital, administered intramuscularly one to two hours prior to anesthesia.

Choice of Anesthesia

The constant aim of course is safe anesthesia. Safe anesthesia is that which dis-

turbs least the metabolic functions of the patient, while at the same time providing satisfactory operating conditions. These fundamental aims are achieved best by the employment of some form of regional analgesia. For operations "below the umbilicus," spinal analgesia is considered safe, predictable and controllable. In procedures involving one extremity, unilateral spinal analgesia can be achieved easily and is less likely to cause a reduction in blood pressure. Spinal analgesia, using hyperbaric solutions, is more predictable and is more easily confined to the areas desired than is lumbar epidural analgesia; therefore, extensive sympathetic paralysis with its associated hypotension is less likely with the subarachnoid technic. Severe arteriosclerotic disease, with or without hypertension, does not contraindicate spinal analgesia, if one is careful and meticulous in his technic. Prostatectomy, fixation of hip fractures, amputations in lower extremities and similar procedures are tolerated well under spinal analgesia.

Other technics of regional analgesia are useful in the geriatric patient. Sciatic-femoral block for the lower extremity, caudal block for the perianal region, axillary block for the upper extremity, regional block for inguinal hernia, and intercostal block for upper abdominal surgery—all these possess the advantage in the geriatric patient that the production of unconsciousness is not necessary. If general anesthesia is not required, the danger of disturbing cerebral function is reduced, and immediate postoperative care and convalescence is simplified. Regional technics preserve the mental status quo of the patient and interfere least with the mode of life and therefore with the metabolic functions of the patient.

If regional methods are not feasible, safe anesthesia is light planes of general anesthesia. Extremely low concentrations of anesthetic drugs are required in geriatric patients. Reactions to painful stimuli are abolished readily and muscle relaxant drugs are required in minimal quantities because muscle tone in these patients is greatly reduced.

In the patient with acute intestinal obstruction, not uncommon in the geriatric age group, where regional analgesia is not

feasible, a transtracheal topical analgesia followed by an awake endotracheal intubation will prevent the danger of aspiration of regurgitated stomach contents which is a real hazard with more conventional methods of anesthesia induction. Depending on the age and debility of the patient, maintenance of anesthesia can be accomplished with nitrous oxide or ethylene only in some instances; at other times low concentrations of ethyl ether, cyclopropane or halothane, with minimal quantities of muscle relaxant drugs, may be required. The important points are to establish a patent airway early, to administer the inhalation drugs in limited concentrations, and to provide adequate ventilation at all times by gently assisting or controlling the respirations of the patient.

Rapid inductions of anesthesia are to be avoided in the geriatric patient. Ultra short-acting barbiturates should be used sparingly and only for the production of unconsciousness. Then inhalation drugs should be administered without rush. The employment of muscle relaxant drugs to facilitate endotracheal intubation is best omitted. Most geriatric patients no longer have teeth, and endotracheal intubation can be accomplished readily in light planes of anesthesia following a transtracheal topical analgesic without disturbing the patient's rhythm of respiration. The sudden institution of controlled respiration, which is necessary after the injection of a muscle relaxant to facilitate intubation, often produces profound reductions in blood pressure in the geriatric patient, particularly when potent anesthetic drugs are being administered at the same time. The less disturbance of the status quo, the better off the patient will be.

Postoperative Period

Recovery rooms are most valuable for the geriatric patient, because here he can receive the special nursing care which is so important to his convalescence. This care can be facilitated by the cooperation of the patient, and therefore rapid awakening and rapid return of cerebral function are most important—hence the value of regional technics. The maximum employment of the stir-up regimen (frequent change of position, instigation of coughing, deep breath-

ing, and active and passive movements of the legs) should be instituted. The physiotherapy division of the hospital often is most helpful in these measures.

In patients who are debilitated and who have been subjected to extensive abdominal or thoracic procedures, it is wise to consider seriously performing an elective tracheotomy at the end of the operative procedure. This course of action will improve ventilation in the postoperative period by reducing dead space, it will facilitate repeated aspiration of secretions from the tracheobronchial tree and therefore reduce the possibility of pulmonary complications, and it will permit the institution of mechanical aid to ventilation should that be required.

Although geriatric patients need "tender, loving care" in all phases of illness, this aspect of their treatment should not be over-

done in the postoperative period by too lavish administration of narcotic drugs. Relief of pain should be provided only when required, and then minimal doses of narcotics should be administered.

Summary

"Fragile—handle with care" exemplifies the attitude with which geriatric patients should be approached. An understanding of the individual physiologic limitations of each patient is necessary if an intelligent application of basic principles is to be applied. Anesthetic drugs and technics should be chosen with due regard for the fragility of the patient undergoing an operation. The postoperative approach should be one of activity within the limits of tolerance of the patient.

The Effect of an Antithyroid Drug on the Clinical Course of Malignant Hypertension. Perera, George A.: *Ann. Int. Med.* 55:29, 1961.

Because of reports in the experimental literature that antithyroid measures may suppress hypertension in animals and that thyroid products may aggravate hypertension, a study was designed to observe the effects of antithyroid drugs on malignant hypertension.

Four patients, two men and two women ages 36 to 42, with a diastolic blood pressure of over 120 and fundoscopic changes of hemorrhage, exudates and papilledema, were selected. Methimazole, 10 mg. q.i.d. was given to each patient daily for periods ranging from four months to over two years. In all cases, the retinal changes cleared, symptoms of hypertension disappeared and the usual progressive changes in kidneys did not occur.

The statistical life expectancy was markedly extended. There was, however, no change in the blood pressure itself. There was also no clinical or laboratory evidence of hypothyroidism.

This study was presented, not for therapeutic implications, but to stimulate inquiry into possible mechanisms of malignant hypertension. (Abstracted for the Middle Tennessee Heart Association by Arthur Anderson, M.D., Nashville.)

The possible role of dietary fat in the pathogenesis of atherosclerosis is before us constantly, in the medical literature, the lay press and in commercial advertising. The truth of what part it plays has not been established as yet. This will need to await more time.

Fat And Your Heart*

MERRILL F. NELSON, M.D., Chattanooga, Tenn.

The present controversy over the relationship of fat to arteriosclerosis and coronary artery disease is not new. In the last century the pathologist Virchow noted that cholesterol was present in the arteriosclerotic plaques in the human arteries. In 1908 the Russian researcher, Ignatowski, showed clearly that feeding cholesterol in egg yolks to rabbits could produce arteriosclerosis. Anitchkov in Russia and Bailey in California in 1914 and 1916 showed that hypertension accelerated the production of arteriosclerotic lesions in experimental animals. Snapper in 1941 found that a lowered intake of fat usually was followed by a lowered content of fat in the blood. In 1952 Groen¹ in Holland and Kinsel² in California independently showed that unsaturated or liquid fat, such as corn oil, replacing saturated or hard fat, such as beef fat, in the diet also lowered cholesterol in the blood. With this as a background investigators have studied many aspects of fat, cholesterol, and heart disease, all over the world.

What do we know about the etiology of arteriosclerosis and coronary artery disease?

The United States is unchallenged in its position for leadership as the number one country in the incidence of coronary artery disease. The average American eats about 40 to 45% of his total calories in fats. Keyes³ and other investigators have found that in general there is some relationship between the consumption of dietary fat by population groups and the incidence of coronary artery disease in that population. He found that this is probably not a simple genetic variation, but that a given population group fed intermediate and larger quantities of fat responded by having

higher levels of fat in the blood and an increased incidence of coronary artery disease. Americans whose parents were born in countries other than the United States have an incidence of coronary artery disease the same as Americans whose ancestors fought the American Revolution. In Capetown, Israel, India, and Finland, the relationship of dietary hard fat to liquid fat seems to parallel the reported deaths from coronary artery disease.

However, the problem is far more complex than this. The reported number of coronary deaths per 100,000 men in the United States is 342. In Denmark, Sweden, Norway and the Netherlands the diet is very similar to ours in composition, in total calories, and in the ratio of hard to liquid fat. These people are similar to the average American, and in fact many of us trace our ancestry to one of these countries. Contrast the 342 deaths per 100,000 in the United States with Sweden's 212, in Norway 128, and in the Netherlands 145. That is, these countries with identical dietary habits have between one-half and one-third as much coronary artery disease in men of all ages as does the United States. This difference is even more striking in the younger age group—age 35 to 39 years. In the United States 50 young men per 100,000 are expected to die each year from coronary artery disease; in the Netherlands it is 7 men, in Norway 12, Sweden 9, and in Denmark 7. In this young age group, where coronary artery disease surely takes a terrible toll prematurely, the other countries named have from one-fourth to one-seventh as many deaths each year. Surely there are many things involved in coronary artery disease other than diet.

What about blood levels of lipids in the individual?

Is this a useful measure of a person's likelihood of having coronary artery dis-

*Read at the meeting of the Tennessee Academy of General Practice, April 10, 1961, Chattanooga, Tenn.

ease? In the United States the average cholesterol determination is in the range of 225 mg. per 100 ml. with considerable variation as between laboratories. The patients with coronary artery disease generally have average levels about 20 mg. per 100 ml. higher. At our Clinic, the average cholesterol level in 107 patients with coronary artery disease was 218 mg. per 100 ml.,—this varied from 139 to 350 mg. per 100 ml. In 100 controls who, of course, may have included many cases of unrecognized coronary artery disease, the average was 213 mg. per 100 ml. The variation was, therefore, less than a significant one, especially allowing for individual variations from day to day and week to week in the cholesterol. It would thus be apparent that in a given individual the cholesterol level is not a satisfactory determination for the accurate prediction of impending coronary artery disease.

About half of the patients with coronary artery disease have a blood cholesterol level higher than the average. In the young men under age 40 with coronary artery disease the figures, however, become significant in that 80% of these do have the disease.

Is there a safe level of cholesterol?

Many observers believe that with blood cholesterol levels of less than 150 mg. per 100 ml. coronary artery disease must be uncommon. (Levels that low are also uncommon in the United States.)

Let us go over what the Central Committee of the American Heart Association said on this matter.⁴ This statement appeared in many newspapers and most of you and many of your patients have probably come to your own conclusions about it. They discuss some of the factors we have mentioned. Then they ask, "who should modify his diet?" The statement continues: (1) "those who are overweight; (2) those with a strong family history of coronary artery disease or strokes; (3) those with hypertension or elevated blood cholesterol; (4) those who have had a stroke or coronary artery accident; and lastly, (5) those who lead 'sedentary lives of relentless frustration.'"

Can we lower cholesterol if, in fact, this is a good thing to do?

For several years we have been plagued

with dozens of medications alleged to lower the blood cholesterol. Almost all are expensive. They are a lot of trouble to the patient. In many cases they are attended by unpleasant side-effects. Triparinol, high doses of nicotinic acid and sitosterols often are successful in lowering blood lipids. I think one can sum up the general feeling of workers in this field when it is stated that it is simply unknown whether or not these will influence present or future atherosclerosis in the individual taking such medication.

Will diet affect elevated cholesterol levels? Again, once a patient develops symptoms of coronary artery disease, it has often been found that the cholesterol levels increase.

Let us discuss for a moment some of the factors, other than fats, which appear to influence the extent of atherosclerosis.

First, as has been shown for many years, hypertension greatly accelerates the development of atherosclerosis, in that it tends to come much earlier in patients with hypertension and be more severe. It is an old truism that women under 40 with coronary artery disease usually have either hypertension or diabetes.

This brings us to the next factor known to influence this disease—the hormones. Women seem quite protected from atherosclerosis in most cases until the postmenopausal age. Women who have been castrated at an early age suffer from nearly as much coronary artery disease as men even in the younger age group.

Some families have an incidence of coronary artery disease greater than one would expect by chance. This is complicated by the fact that diabetes and other metabolic diseases, hypertension, and emotional makeup, as well as dietary patterns, tend to run in families.

Behavior patterns have been related to this problem. In 1959, a study divided the population into three groups: First, those with intense ambition, much drive and a sense of time urgency—the people who feel they never have enough time to get things done; second, those with apparently a lack of ambition and a complete disregard for promptness; and third, a group similar to the second with additional anxiety state.

These groups were well matched in terms of diet, age, etc. Coronary artery disease was seven times more frequent in the first group than in the other two. Blood cholesterol was also elevated in the first group.

Diabetes tends to accelerate the production of arteriosclerosis, causes it to appear earlier and to be more severe. This is unfortunately not related entirely to the control of the diabetes.

Cigarette smoking is said to increase the incidence of coronary artery disease. This is a most complex subject since, if we accept the relationship of behavior patterns to coronary artery disease however vague, the man with a great deal of drive is more likely to smoke and, if so, to smoke more heavily than his phlegmatic counterpart.

Obesity is associated with an increased incidence of coronary artery disease and a shortening of life. Insurance statistics leave no doubt of this. This is not related apparently to levels of blood lipid, since studies of large groups so far have shown no consistent correlation.

Animal experimentation is usually quoted as a strong confirming link in the hypothesis of a relationship of dietary fat to increased blood lipids and thus to coronary artery disease. It is interesting that although dogs, rats, monkeys and many other animals can be made to have an increased severity of atherosclerosis by an increase in the dietary fat, in each case other measures must also be included. For instance, in dogs, the animal must be made hypothyroid. In rats bile acids must be added to the diet. In monkeys a sulphur-deficient protein must be used in addition to a high fat diet. To my knowledge, classical myocardial infarction or cerebral infarction has not been produced in experimental animals. Monkeys, interestingly, show considerable individual variation in susceptibility to the development of high blood lipids following a high fat diet. Some monkeys seem quite resistant to this. In the monkeys that do develop high blood lipids, increased arteriosclerosis was usually found.

Recent work has shown that much of the cholesterol present in intimal plaques is synthesized *de novo* from nonlipid precursors. One school of thought states that perhaps arteriosclerosis is a metabolic disease

and that, as in diabetes, the clinical findings in the presence of the disease may be the result of the disease and not a cause. (For example, elevation of blood sugar found in uncontrolled diabetes is surely not the cause of the diabetes.) Perhaps in arteriosclerosis the elevated blood cholesterol is the result of, let us say, overproduction of cholesterol by diseased arteries. And in the same way as in diabetes, even though sugar does not cause the disease, an excess of sugar probably makes the disease more severe, and thus, perhaps an increased fat level in arteriosclerosis, though not the cause, might be a factor in increasing the severity of this blood lipid level. This has been noted by many observers over the last fifty years. Reduction in total fat intake, reduction in caloric intake, substitution of liquid fats for unsaturated fats for hard or saturated fats usually, but not always, results in a lower level of cholesterol and other blood lipids.

What do we know about the effect of this lowering of cholesterol? Does it do any good? Here are some of the statements made by physicians who have worked in this field for years: "Patients on a low fat diet feel better"; "Those with peripheral vascular disease show some symptomatic improvement, but also none has shown a return of palpable pulsation." "There is no conclusive evidence existing today that dietary modification affects the human atheromatous process." There are conflicting studies but the majority now seem to show that there is no clear evidence that a patient having had a myocardial infarction or stroke lives any longer or is any less likely to have a recurrence on a low fat diet. What then, would be the reason for dietary modification? One thing such a diet will do generally is to cause weight reduction, which in most of our well-fed Americans will probably lead to greater health and longevity. Our patients come to us expecting or demanding a diet. They have read the articles in *Time*, *Reader's Digest*, as have most of us, describing such dietary changes in glowing terms. These patients will certainly think us behind the times if we cannot come up with some change in their diet. It is true that dietary modification with some reduction in the total

amount of calories and substitution of liquid for hard fats is certainly safe, especially in the obese, is not expensive, and shows the patient that we are sincerely trying to do what we believe to be the best thing at present. It can do no harm and it may do some good.

It has been shown that the maximal deposition of cholesterol in the intima is at age one. The next most rapid age of deposition is at age 15 to 30. Possibly we should consider the reduction of the intake of fat in this second group, where hamburgers and French fries, barbecues, etc. often play a preponderant role in the diet. This would take many years, though many of us on our own have been trying to decrease somewhat the hard fat intake of our children and our younger patients, in the hope that we may actually reduce the likelihood of their suffering premature coronary disease. There has been no large scale study on this matter and certainly this is pure speculation.

There are conflicting reports on the effect of exercise on cholesterol, but regardless of whether or not regular physical exercise will prolong life, I am certainly convinced it will make us feel better as long as we live.

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Specialists Do Most of Surgery

About seven out of every 10 surgical procedures in the U. S. are performed by physicians who specialize in surgery, according to Health Information Foundation.

The data was based on a survey of nearly 3,000 families who were queried about a variety of health matters they experienced in a 12-month period in 1957-58.

Of the in-hospital surgical procedures reported, 62% were performed by physicians who limited their practices to surgical fields. Another 8% were done by part-time specialists in surgery.

Other findings:

- Some 42% of all operations were performed by physicians who were certified by either the American Board of Surgery or some other American board whose field includes surgery.

- Two-fifths of all surgical procedures took place in hospitals approved for resident training by the American Medical Association.

- Four-fifths of all operations were done in hospitals accredited by the Joint Commission on Accreditation of Hospitals.

- Surgical specialists tended to concentrate on the more difficult procedures—accounting for 89% of the gastro-intestinal and urinary operations but only 64% of the tonsillectomies and/or adenoidectomies.

- General practitioners in private practice performed only one-fifth of all the in-hospital surgery, but did 34% of the tonsillectomies and adenoidectomies. (*A.M.A. News.*)

The management of diabetes mellitus is arduous at the best. The psychologic reactions which are usually present may make the task doubly difficult.

Psychologic Factors In The Control Of Diabetes*

RICHARD C. SEXTON, JR., M.D., Knoxville, Tenn.

Good control of diabetes mellitus is a resultant of an interaction of several factors, not the least of which is the psyche of the patient. The incidence of neurotic illnesses is second only to dental caries. Inevitably a large number of diabetic patients have antecedent neurotic symptoms or illnesses which adversely affect the control of their disease. Physiologic and psychologic integrative mechanisms are operative to some extent in every patient, and appropriate attention must be given to both. The role of diet, insulin, other hormones, physical activity, and the autonomic nervous system is partially understood. The role of psychologic influences, however, is poorly understood. These influences are admittedly more subtle, more occult, and more difficult to quantitate. The purpose of this paper is to discuss psychologic factors which influence the control of diabetes and to superficially consider some of the psychodynamic mechanisms involved.

It is recognized that carbohydrate metabolism is quite complicated. Certain physiologic and metabolic observations, however, make it quite clear that psychologic stresses play a significant role in basic metabolic processes. Metabolic responses to the psychologic stresses of surgery, for instance, are well documented. Psychologic stresses which evoke the "fight or flight reaction" mobilize glycogen from the liver and prepare the organism for physical encounter or retreat. Hinkle and Wolf¹ have shown that an occasional diabetic, when exposed to stressful psychologic stimuli, responds with hyperglycemia and glycosuria. Most diabetics, however, when exposed to stressful psychologic stimuli respond with a grad-

ual decrease in blood sugar level and an increase in the concentration of circulating ketone bodies. These changes represent an exaggeration of the physiologic changes which occur in normal nondiabetic individuals when exposed to stress. This fall is presumed to be due to increased peripheral utilization of glucose because of an overall increase in metabolic activity. Selye² has demonstrated the same physiologic response when nonspecific stresses are applied in experimental animals. Hinkle and Wolf¹ conjectured that those diabetics in whom hyperglycemia occurred had been subjected to stresses which evoked strong reactions of fear or anger with elaboration of epinephrine and glycogen mobilization. Certain homeostatic mechanisms have been postulated in the diabetic exposed to psychologic stresses. These mechanisms are designed to maintain or restore normoglycemia. Production of ketone bodies by the liver is accelerated. This makes available a substitute metabolite for the muscles. In addition, the respiratory quotient falls and the musculature almost ceases to utilize glucose. It seems likely that these metabolic adaptations are mediated by way of the pituitary and adrenal glands. A hyperketonemic response to stress occurs in both the diabetic and nondiabetic. In the diabetic, however, it may assume a magnitude sufficiently great to evoke a "stress diuresis" or ketosis.

Portis and Zitman³ reported the occurrence of low or flat glucose tolerance curves in patients whose chief complaints were weakness and fatigability. They found that these patients had become quite preoccupied with their work and had "lost their zest for life and work" in a dull monotonous routine which was repugnant even to them. They were characterized by feelings of de-

*Read before the meeting of the Tennessee Diabetes Association, April 11, 1961, Chattanooga, Tenn.

spondency, insecurity, and inadequacy. Their behavior was thought to represent a vegetative retreat. Hinkle and Wolf¹ have shown that administration of glucose in patients adapting to stress may evoke two responses—the glucose tolerance curve may be either higher or flatter. It is suggested that the higher curves are more apt to be seen in individuals under chronic stress and the flat curves in those under acute stress.

The usual symptoms of functional hypoglycemia are anxiety, tension, asthenia, and fatigue. It appears that a flat glucose tolerance curve can be produced in normal individuals when stressful stimuli are applied which make them anxious and tense. It is well known that chronic fatigue and functional hypoglycemia are frequent concomitants. Hinkle and Wolf¹ suggest that fatigue and hypoglycemia in the same individual are "parallel phenomena which are not causally related." They further suggest that the diabetic can be looked upon as an individual in whom adaptive processes have been mobilized not to protect him from ketosis but to protect him against the ill effects of hypoglycemia.

The role of emotional factors in the genesis of diabetes mellitus is difficult to assess. Occasionally, the onset of diabetes coincides with the occurrence of emotional traumas. Certainly, oscillations in the clinical behavior of diabetes can often be rather convincingly related to emotional stresses. Some authors assume that there is a constitutional predisposition in the diabetic and that there is generally an insecure relationship to the mother, and that their metabolic adaptations are appropriate to starvation. Gendel and Benjamin,⁴ in a study of 44 diabetics in the military service, were unable to relate the onset of diabetes to the stresses of military service in a single patient. Grinker and Robbins⁵ emphasize that a "psychologically depressive mood" often exists in the mother of the patient, or in the patient, or in both. My own conclusion is that the role of psychologic stresses in the immediate causation of diabetes is far from clear, and that much research needs to be done in this arena before a final answer will be forthcoming.

The anxiety and insecurity attendant on the onset of a chronic disease depends in

great measure on the premorbid ego strength and personality development of the individual. Concomitant psychologic stresses may be equally important. If pre-existent anxiety is the predominant psychologic disturbance in a given patient, the disease may seem overwhelming to the patient. In such patients frequent emphatic reassurances and other repressive psychotherapeutic measures may be necessary in order to maintain the individual as a productive member of society. The patient in whom anxiety and strong dependency needs coexist may exhibit an ambivalent attitude toward his disease. The potential complications of the disease may activate latent as well as overt anxiety, and may perpetrate a chronic anxiety state in certain patients. On the other hand, the regimentation incident to control of his disease, and the attention which comes to him as a result of the disease, may satisfy previously unrequited dependency needs and the patient may accept the disease with mystifying equanimity. In this situation gratification of dependency needs fulfills a need which is sufficiently great to cause the patient to disregard his anxieties regarding his disease.

The diabetic, despite the reassurances and explanations of his physician, at once feels different from the nondiabetic. The regimentation necessitated by his disease is fairly apparent to the patient. The injection of insulin, or the taking of oral hypoglycemic agents, is often correctly interpreted by the patient as evidence of a deficiency in a substance necessary for his well being. Some patients are secretive about their disease to the extent that they are constantly anxious lest someone learn of their disease. The other extreme exists in the patient in whom the disease is satisfying dependent needs and who actually talks unabashedly and *ad infinitum* about his disease. Then there is the pseudo-independent patient whose defenses against dependent needs are so great that he will not cooperate in a treatment program. In many of these patients the regimentation of treatment has the effect of unmasking dependent needs which they find intolerable and often unacceptable by their family or community. Here the ego defenses are inadequate to

healthfully insulate the patient against the stresses of his disease. These patients may quite effectively deny the existence of disease because they fear the dependency which control of the disease necessitates. They often masquerade as stoics. They frequently lapse from observation for long periods of time, or select a physician who abets them in their effort to deny the existence of disease or minimize its significance. Hence the term "a touch of diabetes." Thus, it is clear how an intrinsic personality pattern in the pseudo-independent patient may result in poor control of diabetes over a long period of time and thus hasten or precipitate many of the somatic complications of the disease.

The following 67 year old white man is an example of the pseudo-independent patient. This patient reported to his local physician in 1958 because of nervousness and tenseness. Glycosuria was found. He was referred to an internist for evaluation with respect to this. A glucose tolerance test was advised but the patient never returned for this. In March 1961 he reported to a urologist because of symptoms of prostatism. Glycosuria was again noted. He was hospitalized for urologic appraisal. A glucose tolerance test yielded a classic diabetic tolerance curve. In all of his conversations the patient minimized the significance of the previously noted glycosuria and stated unequivocally that he did not believe he had diabetes. He said that the attending physician at the time of his father's death had entered a diagnosis of diabetes mellitus on the death certificate but that he had never believed this diagnosis to be accurate. Interestingly, discussions with the patient disclosed that he had read quite a bit about diabetes in the preceding three years. His coronary insufficiency and arteriosclerosis obliterans of both lower extremities had not, of course, been benefited by this three-year period of neglect of his diabetes. It appears that this patient realized deeply that he had diabetes but would not permit conscious recognition of this fact.

Obesity and Diabetes. You are all, I am sure, familiar with the ineffectiveness of the admonition in the obese patient that he or she must lose weight. In general,

chronic overindulgence in food, with all of its somatic reflections, is due to emotional disturbance. The pleasure derived from eating makes dietary discipline uniquely difficult. It appears that overeating is a response to nonspecific emotional stresses, the tonality and pattern of which is quite specific for a given patient, being dependent on the extent of emotional maturity, life situations, etc. It may represent an addiction to food, an attempt to acquire a substitute gratification for intolerable life situations, or a manifestation of emotional illness, such as depression. Many obese patients eat because of a poverty of healthful emotional experiences in their life situation; obesity may, therefore, represent a neurotic adjustment. For some obese patients food serves as a sedative, and they often eat because of anxiety, anger, or disappointment.

The United States Public Health Service has estimated that at least one-fourth of the adults in this country are obese, and that this reaches 68% in older women. It is believed to be more than coincidence that diabetes is quite prevalent in the latter group. Duncan⁶ states that about 80% of diabetic patients are or give a history of having been overweight. He also supposes that "pre-diabetic obese persons maintain a normal blood sugar and delay or prevent the onset of diabetes by producing enormous amounts of endogenous insulin, and that this increased demand leads eventually to an exhaustion of the islet cells and the onset of clinical diabetes in persons also predisposed by heredity to the disease." It seems reasonable, therefore, to conclude that obesity, with its increased metabolic demands on the pancreas, results in the onset of diabetes much sooner than it would otherwise occur. In some older patients with a genetic predisposition it might not occur at all if a normal weight were maintained. Thus it is that the overeating due to depression, boredom, or dependency needs of frustration may precipitate diabetes in a predisposed patient much sooner than it would otherwise occur. The success of efforts at weight reduction in these patients will be indirectly proportional to the magnitude of the underlying emotional disturbance and directly proportional to the skill and patience of the physician. Hence,

it is that poor control of diabetes in these patients may be neurotically determined. The presence of a mechanism for gaining whereby the patient derives some apparent benefit, either material or emotional, from the morbidity which attends poor control renders therapy doubly difficult.

A diagnosis of any chronic illness, as previously indicated, may arouse feelings of anxiety and insecurity in the patient. The complexion and intensity of the patient's reaction to his or her illness relates both qualitatively and quantitatively to the pre-morbid personality of the patient. The patient who is basically anxious and insecure will become more anxious and less secure. Occasionally, the diagnosis of a chronic illness, such as diabetes, provides a focal point on which pre-existing, free-flowing anxiety symptoms can be anchored.

W.B., a 41 year old white man, reported on June 2, 1960, with the following statement: "I think it's mostly my nerves. Last fall I had hemorrhoid trouble and kidney trouble, and I've been nervous ever since." He reported sharp pains in his chest, "mostly just before it rains," headache, dizziness, nervous spells, easy fatigue, morning fatigue, vague midabdominal pain, and palpitation. The patient was obviously quite anxious regarding his symptoms. The physical examination disclosed moderate generalized obesity as the only abnormality of note. Routine laboratory studies disclosed a 2+ glycosuria. An oral glucose tolerance test was then done, which disclosed a diabetic tolerance curve. The patient was apprised of the virtual normality of the physical findings, and was informed regarding the significance of the laboratory studies. He was emphatically reassured, and diet therapy was instituted. The patient's diabetes proved quite amenable to diet therapy, and he has been asymptomatic for many months. This patient's diabetes provided him with an explanation for the anxiety symptoms which prompted his first visit and thus far they have remained in abeyance.

The psychologic factors in the control of diabetes may be quite similar, psychodynamically, to those factors which influence control of other chronic diseases, such as heart disease, peptic ulcer disease, tubercu-

losis, and chronic articular diseases. Each of us recalls patients with these disorders in which poor control of the disease process was neurotically determined. Patients with diabetes mellitus are daily reminded of their disease. There is an intrinsic arrangement in the patient-doctor relationship which may stimulate to some extent the emotional interrelationship which prevailed between the patient and his parent or parent surrogate. If the latter relationship was a healthful and pleasant one, the likelihood is great that the patient-doctor relationship will be similar and that this will be reflected by good diabetic control. If, on the other hand, an unhealthy interpersonal relationship prevailed, this may be reflected by varied aberrant reactions to the disease and to the parent surrogate, the physician. The patient whose emotional development was arrested by over-protective parents at the dependent stage of development will often regress rather readily to a more primitive dependent state and will utilize his disease to manipulate those about him. A chronic depressive state in the diabetic often creates quite a barrier to good control. Such a patient, who has been previously cooperative, may begin to exhibit a lackadaisical attitude toward his disease. The existence of depression in these patients, particularly elderly patients, may be difficult to recognize so that a high index of suspicion must be maintained. Occasional patients may suddenly suspend insulin and dietary efforts in a suicidal attempt. Repetitive episodes of keto-acidosis may be related to depression. In other patients suspension of treatment efforts may not relate to depression. Instead it may represent an escape from an intolerable life situation into the sheltered environment of the hospital, or it may represent an expression of hostility toward a parent, relative, or spouse. Sometimes environmental manipulations or some sympathetic attention to the life situation of the patient will prevent these episodes.

The obsessive-compulsive personality constitutes quite a problem, both for himself and the therapist. It is extremely important to try to recognize these patients in advance. The superego in these patients tyrannically dictates their every move.

These patients, in my opinion, should be told as little about their disease as is consistent with good patient care. Usually the more these patients know about their disease the more they want to know. They often demand to know the blood sugar level, and may be quite disturbed by minor fluctuations in the levels of blood sugar or by the physician's unwillingness to tell them the exact blood sugar level. They exhibit the same perfectionistic tendencies with respect to their disease as they do in their avocations. They will not compromise with good control. This rigid adherence to the treatment program may become so extreme that the patient has all the other members of the household participating with him in the control of his disease. Any departure from his ritualistic behavior may provoke major domestic upheavals. The disease is often satisfactorily controlled, but the toll on other members of the family, and at times the physician, may lead one to question the cost of this control.

The expression, "diabetic children are unusually bright," is often made. Fisher and Dolger⁷ in a long-term study found that scholastic achievements of the diabetic child paralleled social adjustment. Most authors agree that personality changes and maladjustments, however, are to be expected in the diabetic child. McGavin and associates,⁸ concluded that diabetic children were neither brighter nor duller than nondiabetic children of comparable age. There seems to be general agreement with this conclusion, although there are a few reports which take exception to this conclusion. Joslin's group was assumed by Brown and Thompson⁹ to be more intelligent because they were from a higher socio-economic group.

The impact of a diagnosis of diabetes in a child is great for several reasons. The disease exists during the formative years in the child's development. Appropriate attention to diet, activity, and insulin necessitates considerable parental and professional supervision. This may lead to overprotection and the development of a dependency state at the very time the child should be divorcing himself from the dependency relationship of childhood. Excessive anxiety on the part of the parents with respect to the disease and its complications is often very

effectively transferred to the child and even fabricated into the developing personality of the child. This perpetrates childhood needs for dependency, produces chronic anxieties with respect to his disease, and smothers initiative in other arenas of living. This may result in various forms of passive-aggressive personality development with weak ego strength. These patients may appear helpless, indecisive, and inefficient. Their aggressiveness may be manifest by stubbornness, procrastination, temper tantrums, irritability, and passive obstructionism. Often a masochistic-sadistic interrelationship prevails between the patient and the parent with the physician attempting to serve as an arbiter in the currents of emotional cross-fire. This cross-fire may become so intense that the physician may become totally ineffectual in his more mundane treatment efforts.

Healthful parental and patient anxiety, however, is desirable and necessary if optimal control is to be achieved in the juvenile diabetic. To assure that anxiety exists in healthful rather than unhealthy proportions is a major challenge and requires a concerted effort on the part of the parents and physician. This requires patience, sympathy, understanding, discipline, affection, and praise all given in a judicious fashion. Optimism should prevail in the patient-doctor and patient-parent relationship. Diabetic camps are doing much to reconcile the diabetic child with his disease and aid him in problems of social adjustment. Perhaps in no other disease is the emotional reaction of the parents more cruelly imprinted on the child.

Finally, something should be said about the role of the physician's personality in the control of diabetes. We have already indicated that interpersonal relationship which prevailed between the patient and his father is often mirrored in the pattern of diabetic control. A patient who has a hostile orientation toward father figures is apt to revolt against the therapeutic restrictions imposed by the physician. The physician with an authoritative air is apt to intensify this revolt. The anxious, inadequate patient, however, may feel overwhelmed and exhibit regressive behavior which justifies his unwillingness to assume any personal

responsibility for the control of his disease.

The interpersonal relationship between the diabetic and his physician can become quite intense and stressful. Emotional maturity on the part of both is desirable if optimal control is to be maintained. The physician, however, should be more mature and more resilient in the adaptations necessary to good control. Dictatorial ultimata serve only to weaken or perhaps sever the relationship. A patronizing attitude on the part of the physician may produce indifference in the patient, therapeutic abandon, self treatment, and even subtle manipulation of the physician. Punitive therapeutic dicta are usually recognized as such by the patient who seeks retribution through disregard of the prescribed regimen. A masochistic-sadistic interplay may ensue in which only the consequences of poor control triumph. Total submission of the patient may satisfy dependent needs of the physician and vice versa.

Summary and Discussion

An attempt has been made to discuss a few of the manifold psychologic factors which influence the control of diabetes. The psychodynamic processes by which control of diabetes is adversely influenced are discussed in a superficial fashion. Psychopathology is often more important than pathophysiology. It is realized that recognition of these influences is often easier than their correction. Recognition of these influences, however, and a reasonable, consistent effort to correct them, will often be rewarding. This effort need not be too time consuming. A small amount of time devoted to this facet of the patient's illness often yields surprising results. Occasionally patients are refractory to all efforts. Here the physician must be a realist and not allow his compulsive desire for good control

to destroy his usefulness to the patient.

This discussion is not meant to imply that diabetics as a group are difficult to deal with. Instead, most diabetics when provided with reasonable information regarding their disease and appropriate professional surveillance will respond with good control of their disease and an attitude of gratefulness toward their physician. The hard core of psychologically disturbed patients, however, present a real challenge. These patients and their relatives are often quite vocal in their criticism and denunciation of our profession. We must be careful in this machine age of medicine that we do not neglect the art of medicine when confronted with these patients.

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British Hospitals: Improved treatment and improved outpatient facilities made for more effective use of hospital beds in England last year, Ministry of Health reports. Waiting lists were reduced by 10,000—now stand at 466,000. (*A.M.A. News.*)

CLINICOPATHOLOGIC CONFERENCE

City of Memphis Hospitals* Meningococcemia

E.C., a 70 year old white woman, was admitted into the John Gaston Hospital on Feb. 28, 1960, because of chills and fever of 18 hours' duration. Except for a slight cold she had been well until awakened at 2 a.m. on the day of admission by a three-hour episode of "shaking all over." She also complained of malaise and slight headache and had an unsteady gait. Aspirin was ineffective against an oral temperature of 103.6°, and at 6 a.m. she was brought to the Emergency Room, where she vomited greenish fluid. A tentative diagnosis of "flu" was made, and she was sent home on prochlorperazine, forced fluids and bed rest. After taking this drug at 9 a.m. she became very drowsy and vomited repeatedly as attempts were made to arouse her. Later stupor developed, and fecal incontinence was observed at 3:15 p.m. A splotchy red and blue abdominal rash appeared. By 5:30 p.m. her toes were cyanotic, and she was returned to the Emergency Room. There had been no cough or hemoptysis; however, she had had sinusitis for many years and was allergic to many foods and drugs, including penicillin. She had been receiving prednisone and chlorpheniramine one year for an allergic eye condition. A son had had tuberculosis, but the patient had not visited him in several years. There had been an episode of chills and fever lasting one night one or two years prior to admission. She had had an appendectomy, a hysterectomy and a cholecystectomy 20 to 30 years before admission.

Physical Examination: Temperature was 106° rectally, pulse 130, respiration 24, blood pressure 60/0. She was a well-developed, well-nourished, cyanotic, comatose white woman with cold, moist skin. Pupils were constricted and reacted minimally to light. Petechiae were seen on the conjunctivae, palate, pharynx and extremities. No lymph nodes were palpable. A few moist bibasilar rales were heard; there was no cardiomegaly or murmur. Abdominal examination was negative except for "large splotches of blue over the lower abdomen which partially blanched on pressure." Purpuric spots were noted also on the forehead and chest. The neck was supple, and all extremities moved spontaneously, but deep tendon reflexes were hypoactive. The patient responded only to pain.

Laboratory Data: Hct. was 43%; WBC 13,775 with 5 bands, 23 segmented neutrophils, 69

lymphocytes, 3 monocytes; 40 smudge cells; 170 thrombocytes per 100 o.i.f., 9 nucleated RBC. per 100 WBC. Phase platelet count 82,000 per cu. mm. Urine: pH 4.6, sp. gr. 1.018, protein negative, sugar negative, 0 to 2 RBC. per h.p.f., 0 to 2 WBC. per h.p.f., many hyaline casts. VDRL test was nonreactive; BUN 27 mg./100 ml., serum C1 105 and plasma CO₂ 11 mEq/L. Stool guaiac negative. The cerebrospinal fluid showed 15 lymphocytes and 2 polymorphonuclear cells per cu. mm.; no bacteria were seen on Gram stain; opening pressure was 177 and closing pressure 140 mm. of water; protein was 42 and sugar 71 mg. per cent. ECG: sinus tachycardia with frequent APC's, LAD and nonspecific T-wave abnormalities.

Hospital Course: Maintenance of normal blood pressure with massive doses of norepinephrine resulted in temporary improvement. She was also given intravenous sulfadiazine, hydrocortisone, and intramuscular chloramphenicol. At 1 a.m. the next morning digitalization by intravenous deslanoside was begun, and she was put on the Bennett respirator at 3 a.m. A rapid downhill course continued, and she expired at 4:30 a.m. on February 29, 1960, 26 hours after onset of her illness.

DR. CULBERTSON: We have the problem of an elderly woman who had been well except for a slight cold, but who was awakened at 2 a.m. in the morning by symptoms of an overwhelming illness, from which she was destined to die in a scant 26 hours. This manifestly was a catastrophic illness. This patient's final episode was ushered in by a severe and prolonged chill, which suggests either malaria or bacteremia. In view of the relatively low prevalence of malaria in this community at the present time, it seems that bacteremia would be the more likely choice of these two possibilities. There was a history of one episode of chills and fever one or two years prior to admission at the time of the fatal illness, and this previous episode of chills and fever lasted one night. There was no mention of night sweats at this time or in connection with any other points in this history, but the history does state that a son of this patient had had tuberculosis. Tuberculosis always must be considered in any inflammatory disease with central nervous system manifestations. The story shows that the patient had been taking a corticosteroid drug for a year. This could have impaired her natural defense against quiescent pulmonary tuberculosis, which could have led to terminal central nervous system

*From the City of Memphis Hospitals and the Divisions of Medicine and of Pathology and Microbiology, the University of Tennessee, Memphis 3.

James W. Culbertson, M.D., Professor of Medicine and Richard H. Walker, M.D., Associate Professor of Pathology and Microbiology.

involvement. There is no report in our protocol of examination of the chest by roentgenography. Likewise, there are no helpful neurological signs for the diagnosis of central nervous system tuberculosis; and, unfortunately, the spinal fluid findings were equivocal as reported and incomplete with respect to points that might have been helpful in seeking to confirm a diagnosis of meningeal tuberculosis.

The chills and fever which the patient is reported to have had one or two years before admission may, of course, have been due to a transitory viral infection or some other infection; or that may have been an episode of pyelonephritis, and this could be the source of a fatal septicemia. The urinary findings are compatible with chronic or recurrent pyelonephritis but not very helpful in establishing an actual diagnosis; yet this is characteristic of this very insidious disease, which is notoriously difficult to diagnose. The patient's terminal symptoms of malaise and headache could accompany any infection. The sign of an unsteady gait may be related to central nervous system affection, or it may be related to incipient circulatory failure, or it may have no clinical significance. The report of ineffectiveness of aspirin against temperature elevation to 103.6 suggests that we are dealing with a bacterial rather than a viral infection. Although it does not exclude the possibility of a viral infection, it does cast some doubt on the emergency room diagnosis of "flu."

Vomiting, which was reported as occurring while the patient was still rational, may accompany various infections. However, considering the subsequent shock, one must consider in association with vomiting either massive or widespread mesenteric arterial thrombosis or embolism, despite the absence of history of abdominal pain. The rapidly developing stupor and the fecal incontinence may have been due to cerebral cortical depression associated with sepsis, but it also may have been a manifestation of shock due to circulatory collapse. The splotchy red and blue abdominal rash may have been due simply to peripheral circulatory failure. The description of this rash is not precise enough to help very much. If this rash had been said

to show a change in character from cyanosis to erythema to pallor in a splotchy distribution, then one would think of malignant carcinoid. On the other hand, if this were a hemorrhagic rash of petechial character with evidence of severe sepsis, one would think of septicemia, especially due to meningococcemia or staphylococcemia or rickettsial infection, such as Rocky Mountain spotted fever. All of these conditions require bacteriologic or immunologic data for precise diagnosis. However, I do want to mention in passing the special situation in meningococcemia with purpura and hemorrhage into the adrenal glands producing shock and the clinical picture of the Waterhouse-Friderichsen syndrome. I should add that other organisms than the meningococcus can be associated with this devastating clinical situation. I relate the cyanosis of the toes to circulatory failure. We must take note of the history of allergy to many foods and drugs, including penicillin, to suggest the possibility of polyarteritis nodosa or disseminated lupus erythematosus or some other general vascular disorder of the collagen disease group as the underlying disorder, with the final sepsis as the *coup de grace*.

Now let us look at the physical findings. The temperature of 106° which was measured at the time of the patient's admission suggests either overwhelming infection or a hypothalamic lesion of the brain. The pulse rate of 130 associated with blood pressure of 60/0 indicates shock due to vascular collapse, and this picture is described as that of peripheral circulatory failure. The respiratory rate of 24 cycles per minute probably is related to the acidosis which is demonstrated later in the protocol, unless there is some undisclosed extensive pulmonary involvement of the lung or possibly a brain stem lesion involving the medulla. Petechiae were observed and were found to be distributed extensively; so we have to deal with the clinical phenomenon of purpura. One has to think of subacute bacterial endocarditis with a purpuric lesion in the presence of fever, but it is difficult to make a definitive diagnosis of endocarditis without a heart murmur, without cardiomegaly, and without a demonstrated anemia. The rales over the lung bases

could be due to heart failure, but they also might be due to bronchitis, or they might be associated with increased intracranial pressure; so we are not certain that this patient actually went into terminal congestive heart failure, even though she was attached to the Bennett respirator in her final hours. Perhaps a palpable spleen is excluded by the general negative statement with regard to the examination of the abdomen, and it is noted that no lymph nodes were felt during the physical examination. Furthermore, no physical signs of meningitis were described in the record.

The laboratory data are interesting. I suspect that the hematocrit of 43 per cent as recorded is misleading, representing a severe contraction of the circulating blood volume which often occurs in elderly people. Certainly in this patient an initial contraction of the blood volume should have been aggravated by the fever during the hours of her last illness. So, she may have had significant anemia, and this anemia may have been hemolytic. A serum bilirubin measurement and a Coombs test would have been helpful. We note a mild leukocytosis, but without the expected granulocytic response to what we are presuming to be a bacterial infection. This, of course, is speculative, but failure of an expected granulocytic response may occur in acute severe infection in old people. Nevertheless, with the obvious leukocytosis, with numerous smudge cells reported, with nucleated erythrocytes in the circulating blood, and with thrombocytopenia, one must give serious consideration to chronic lymphatic leukemia as an underlying disease with sepsis and purpura as fatal complications.

Another far less common disorder, which would fit many of the findings in this protocol, must be considered at this point; namely, thrombotic or thrombohemolytic thrombocytopenic purpura, which was described in 1925 by Moschcowitz as "an acute febrile pleiochromic anemia with hyaline thrombosis of the terminal arterioles and capillaries."¹ This disorder involves the small vessels of the body in a very wide distribution; and the effects of small vessel thrombosis are especially conspicuous in the myocardium, the capsular zone of the ad-

renals, the renal cortex, the pancreas and the gray matter of the brain. The disorder is characterized clinically by thrombocytopenic purpura, by hemolytic anemia (usually with a negative Coombs test, and with bizarre neurologic signs and symptoms. I confess a rather compelling temptation to offer this as a primary diagnosis in this instance.

The urine had a strikingly low pH of 4.6 and probably reflects a severe acidosis, which was indicated by the plasma bicarbonate level of 11 mEq./L. If these figures are valid, this suggests rather serious depletion of the fixed base of the serum and supports the probability of adrenal cortical failure due to hemorrhage into the adrenal cortices. The cerebrospinal fluid findings were abnormal but not diagnostic.

In summary, we do not have enough information to make a satisfactory diagnosis of this patient's final illness. She appears to have died in a state of vascular collapse, which may have been due to adrenal cortical failure, to overwhelming sepsis, or to a combination of the two. The demonstrated purpura may have been important. We can only speculate as to the nature of the underlying disease. Perhaps chronic lymphatic leukemia is the best choice for the primary disorder. Nevertheless, an attractive case can be made for the uncommon condition: thrombotic thrombocytopenic purpura. Diffuse vascular diseases of the collagen type seem somewhat less likely. Subacute bacterial endocarditis has not been excluded by the information recorded in the protocol. Fulminating tuberculosis always has to be considered in a perplexing picture of this sort with involvement of the central nervous system and adrenal glands. Perhaps this is the second best choice for an underlying disease. My suggestions of possible offending organisms and sources of systemic infection are as follows: first, the colon bacillus from the kidney; second, the staphylococcus from the kidney; third, the meningococcus from the respiratory tract; and fourth, the tubercle bacillus from the lung.

DR. WALKER: There is one important piece of information which has been withheld from the protocol. I think it is with all fairness since it was also unknown to

the physicians who were taking care of this patient. It did not become available until after the patient died. Following death, the Bacteriology Department reported that it had isolated in pure culture *Neisseria meningitidis* from blood and spinal fluid specimens taken clinically. At autopsy our cultures were sterile, and this frequently is the case with the meningococcus because, as you know, this organism is very susceptible to chilling. This is important clinically because one may lose the organism if the culture medium is cool or even at room temperature. When bodies have been placed in the morgue and allowed to cool considerably, we frequently lose this organism.

At autopsy, this was a white, rather obese female, weighing 165 pounds and had, as described in the protocol, a purpuric rash over the extremities, the abdomen, the face and the neck. She also had a petechial type of rash over the abdomen and legs. There was only a moistening amount of fluid present in the serous cavities. The heart weighed 350 Gm., which is slightly hypertrophied. It had petechiae on both the epicardial and the endocardial surfaces. The right lung was about twice normal weight, was extremely wet and congested on cut section, and it, too, had petechiae over the pleura. The liver and spleen were not remarkable except for congestion. The kidneys were somewhat hyperemic, otherwise not remarkable. There were diverticula in the colon, as an interesting incidental finding. The brain weighed 1170 Gm. and grossly showed no significant abnormalities. There was no exudate, and the meninges were glistening. The adrenals were, as Dr. Culbertson suggested they might be, extremely hemorrhagic, bilaterally, weighing about twice normal, 30 Gm. and showing diffuse and severe hemorrhage involving all portions of both adrenal cortices. The microscopic sections revealed acute passive congestion of the viscera. A small antemortem embolus was found in a pulmonary arteriole. Focal areas of acute myocarditis were noted, which probably were secondary to the sepsis.

Sections of the adrenals confirmed their gross appearance. There was a massive acute hemorrhagic necrosis of the adrenal cortex, bilaterally, without apparent in-

flammatory reaction or notable thrombosis. Inflammation was also absent in the meninges.

Sections of the bone marrow revealed prominent lymph follicles and an apparent increase in lymphoid cells. This finding together with the peripheral blood picture reported in the protocol strongly suggests that this patient did have chronic lymphocytic leukemia as an underlying disease.

Gram negative diplococci, morphologically resembling *Neisseria meningitidis*, were found on gram stains of tissue sections of the adrenal cortex and brain where they were noted intracellularly in phagocytic cells in the adrenal cortex and subarachnoid space.

Final Pathologic Diagnoses:

- 1) Acute fulminating meningococcemia
- 2) Massive hemorrhagic necrosis of adrenal gland, bilateral
- 3) Multifocal acute myocarditis
- 4) Chronic lymphocytic leukemia, probable

Dr. Culbertson, what is your reaction to the differential white blood count, which indicates an increase in band forms but not in the relative number of mature segmented polymorphonuclear leukocytes?

DR. CULBERTSON: Dr. Walker, the only comment I have on this is that I'm sorry that this appears to be a fact; but it makes it rather difficult for us to recognize, suspect and evaluate pyogenic infection in old people. This becomes very important in situations of intraperitoneal infection, for example. Not only do patients fail sometimes to show the normal hematologic response to infection, but they fail also to show the expected physical signs of rigidity, spasm, and other things; so that life grows harder when one is trying to make a precise diagnosis. I think that we simply failed to get the ordinary response of the granulocytes, which is the first line of defense against bacterial infection. This seems to be characteristic of old or debilitated people, but it may be related to the overwhelming nature of the infection. This is another thing. If the infection is so massive in the first place as, for example, in the erosion of an abscess into the blood stream, this may be an important factor in such a clinical situation.

DR. WALKER: I have two questions.

One, I believe the protocol said the patient was receiving steroids for an allergic eye condition. I presume that this meant topical steroids, but if not, would this be important in the pathogenesis? Secondly, it seems to me that the patient received just what she should have for this condition. Is there any other way she could have managed?

DR. CULBERTSON: I cannot be sure how this corticosteroid was given. I presume that the ophthalmic suspension of prednisone was used topically. If so, this should not have made any real difference with regard to systemic disease. However, if she had been taking the tablets of prednisone and chlorpheniramine by mouth, there could be some systemic effect. Systemic administration of corticosteroid preparations does tend to interfere with the body's natural defenses against infection, and this may activate quiescent tuberculosis. Similarly, it may be difficult for a patient ingesting a corticosteroid drug to react in a normally protective way against invasion by pyogenic organisms. Before I comment directly on therapy for meningococcemia, let me emphasize the point that this type of sepsis constitutes one of the most important emergencies in infectious disease in the present medical era. Pediatricians are well aware of this, and they are alert to it. This diagnosis often is established and treatment begun within the first few hours in a sick child because pediatricians always are looking for meningococcemia and meningococcal meningitis. They quickly do a lumbar puncture and then begin treatment on the basis of physical and immediate spinal fluid findings. The reason they are so concerned about this is that it is a curable disease if the diagnosis is made early and vigorous treatment is undertaken promptly; but these two things are necessary (1) active suspicion and prompt diagnosis and (2) early and intensive treatment. In adults, likewise, this disease is curable, but the chance for successful treatment depends very largely on early diagnosis. Dr. Walker is entirely correct in his suggestion that this patient received appropriate chemical and antibiotic therapy, despite the fact that no precise bacteriologic diagnosis had been estab-

lished. Sulfadiazine is specific against meningococcal infection and is the primary drug of choice, while penicillin is a useful adjunct in massive infections. Both of these are bactericidal agents and therefore especially desirable in systemic infection. The bacteriostatic drug chloramphenicol had no rational place in the present regimen but would have been useful if the organism had proved to be *Hemophilus influenzae*. I believe that the battle had been lost at the outset in this patient because the fulminant infection had advanced too far and too fast before treatment was begun.

DR. BRODY: I'd like to ask Dr. Walker the exact source of this overwhelming infection. You indicated that this may begin as a pharyngeal infection and yet, for some reason, an individual can have this and suddenly develop the fulminating disease, the bacteremia and so on. Is there hematogenous spread to areas where the growth of the organism proceeds very rapidly? Can you say at this point how this takes place?

DR. WALKER: The pathogenesis of this infection is not well understood. The infection may take two courses. The carrier may pass it on to a second person, who may not allow the organism to reside in his throat for any period of time. Or, he too may become a carrier, and nothing more, or he may develop a low-grade, mild pharyngitis. The pharyngitis may or may not result in a septicemia.

DR. BRODY: I think we might point out that meningococcemia may also occur in chronic form which gives an elevation of temperature, positive blood cultures, and other signs. I haven't seen such in recent years, but I'm sure we still have them. Dr. Culbertson, you talked about circulatory failure, shock, and vascular collapse. What is the pathophysiology of these things, Why didn't the patient have cold sweat, why does the blood pressure drop?

DR. CULBERTSON: Dr. Brody wants me to emphasize the fact that what you ordinarily think about when you use or hear the term circulatory failure is inadequacy of the heart, and the ordinary kind of heart failure which you see is congestive heart failure, which is due to decompensation of the myocardium. This is the commonest

form of heart failure, and it may be either acute or chronic. If the left ventricle is decompensated, this is manifested by evidence of pulmonary vascular congestion with rales, pulmonary edema, and other signs and symptoms that go along with increased pressure in the pulmonary capillaries. If this situation is not relieved, it leads sooner or later to secondary decompensation of the right ventricle also. There is another kind of heart failure which also can be responsible for circulatory failure; that is if the heart is inadequate not because of myocardial decompensation but because of abnormal performance for other reasons. For example, if the heart fails to beat, cardiac standstill or asystole is a type of acute heart failure; and unless something is done about it promptly and successfully, of course it is fatal. There are other similar instances in which the heart is beating but so irregularly or so rapidly that it cannot pump a normal amount of blood, as in a prolonged and extreme supraventricular tachycardia or a very rapid ventricular tachycardia or the more desperate situation of ventricular fibrillation with totally ineffectual beat. This also is circulatory failure on the basis of inadequacy of the heart.

This woman probably did not die in heart failure; she may have had some cardiac inadequacy at the end. Although she had some interstitial fibrosis, the heart was not enlarged; probably the myocardium would have been adequate if the peripheral vessels had been adequate. This kind of circulatory failure, probably unfamiliar to most of us, probably is one of the by-products of our relatively successful antibiotic therapy nowadays. In infectious diseases we do not see patients so often as previously in trouble with vascular collapse. The occasions in which we see vascular collapse most often now are in the post-operative state or in situations of severe sodium depletion. Before the antibiotic era, however, we used to have to deal with some very troublesome infections, the most notable of which was pneumococcal pneumonia. Patients having this treacherous disease, especially old people or others in whom several lobes were involved, tended to die in circulatory failure which was due to vascular collapse. Patients with severe

pneumonia tended to be cyanotic, and this cyanosis was not primarily because of lack of adequate aeration of the blood in the lungs, despite the consolidation. A more important cause was dilatation of the peripheral arterioles and venules and pooling of blood in the abdomen and extremities. The primary trouble in such a situation is that the arterioles have lost their normal degree of tonic contraction of the smooth muscle in their walls, so that the normal resistance to the flow of blood through the arterioles into the capillaries is lost. Regardless of how fast the heart may beat or how big the stroke volume may become, regardless of how much blood the heart puts out as measured minute volume, this is not effective because the peripheral resistance of the arterioles has fallen to a degree that is incompatible with effective operation of the circulatory system, and the heart beats itself to death. This state often does lead to myocardial decompensation because of the rapid rate and consequent lack of opportunity for perfusion of the heart muscle tissues during diastole, because diastole is shortened so much. If not relieved, these patients die in circulatory collapse. There are two important factors in this. One, of course, is that the products of the infection can depress the function of the smooth muscle so that they lose their normal tone and the power of contraction. The other feature is an apparent disturbance of sodium metabolism. In pneumonia the sodium ions become sequestered in the lungs for some unknown reason so that there is a deficiency of circulating sodium ions. In the present situation, because of the involvement of the adrenal cortices, there was not a normal output of aldosterone to promote the normal reabsorption of sodium by the renal tubules, so that this patient had a very rapid depletion of the body stores of sodium. For the two reasons, toxic depression of the arteriolar muscle plus sodium depletion, it was impossible for the arterioles to carry out their normal function. Thus, the circulatory failure was due primarily to decompensation of the arterioles.

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President's Page

Occupational Hazard



WILLIAM O. VAUGHAN,
M.D.

In the last few months there has been much concern on our part about the physicians' image. We have been greatly concerned with the recent legislation and the threat of socialized medicine. We are making some better efforts to regain the confidence and good will of the public and yet there is still much to be done.

I wonder if we will be successful until we initiate better public relations within our own ranks, our local and state societies. We need to re-light the physicians' interest in medical organizations. Physicians should be interested in being informed in what their societies are doing—their activities, policies, and services. I feel, too many physicians are dragging their heels and trusting that someone else will do the job.

We are taking it on the chin from many critics. We have accepted just criticism humbly and moved to correct sources of dissatisfaction. I firmly believe that we should stop being on the defensive and regain our sense of pride in our medical organizations! I do not believe that we need to apologize for an organization sworn to promote the science and art of medicine and the improvement of the health of our citizens.

Furthermore, I know there is criticism of organized medicine within its ranks. One frequently heard is that the society is run by self appointed, self perpetuating cliques. All one need know is the password to be admitted to the inner ranks of organizational "brass hats." Most of us, I am sure, appreciate and are proud of the honor and official position organized medicine offers, however, I believe that many of us are afraid of the password. However, it is a very simple one, "I want to work." Whisper this in the Secretary's or the President's ear. I am sure you will get results.

As individuals we can maintain our own image but not that of medicine without cooperation, organization, information and work. Let's get on the offense which we can do with your cooperation and interest.

President

A handwritten signature in dark ink, reading "W. O. Vaughan". The signature is fluid and cursive, with a large initial "W" and "V".

President

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Address papers, discussions and scientific matter to R. H.
Kampmeier, M.D., Editor and Secretary, 8210 Vanderbilt
University Hospital, Nashville 12, Tennessee
Address organizational matters to Jack E. Ballentine,
Executive Director, 112 Louise Avenue, Nashville 5, Tenn.

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October, 1961

EDITORIAL

OBESITY

Too little weight and too much weight, have been problems in nutrition since the beginning of time. The influence of too little weight on the development or progression of diseases such as tuberculosis, or the association with deficiency states such as pellegra, has diminished with the development of vitamin supplements, food concentrates, elaboration of antibiotics and related adjunctive measures. On the other hand, too much weight or obesity has continued to require more and more thought. The increased metabolic and work obligations of the obese individual, with the subsequent influence on blood pressure and circulatory responsibilities has been appreciated more and more of late. In addition, the relationship of obesity to the appearance of diabetes, the occurrence of hypertension and arteriosclerosis, its unfavorable influence in the middle-aged individual with osteoarthritis or cholelithiasis, its worsening of the hazard

of surgical procedures, all are features which have stimulated a corrective effort. To crystallize the problem has been the recent era of popularity of the thin figure. The cosmetic desire tilts the scale heavily even when health reasons may be ignored.

Several worthwhile reviews have been published recently. In the Bulletin of the New York Academy of Medicine¹ is the publication of a series of reports on the influence of obesity on morbidity and mortality, the pathology of obesity, the genetic factors concerned, the caloric cost of living and the prophylaxis and treatment of obesity. The several authors concerned present their special interests in a clear-cut manner. It is evident that a great many statistical facts verify the opinion that the obese live less long and are more beset with illness than the thin. Only small daily excesses of caloric intake can, over the years, result in a considerable gain in weight. A difference of 10 to 15 calories per day over a 10 to 15 year period can cause a difference in 10 to 15 pounds of body weight. We gain weight when our caloric intake exceeds our metabolic requirements, regardless of our sex, age, glandular makeup and any possible personality disorder. When sleeping we burn 65 calories per hour, lying down 75, sitting 81, standing 90, and during light activity 156 calories per hour. When we walk for an hour we use up 210 calories, cycling 122, and driving a car 17 calories. The lesson gained from these different modes of transportation is obvious. A golfer uses 165 calories of energy per hour, a tennis player 210, a bowler 240, a football player 300, a badminton player 115, a horseback rider 90, and a gin or bridge player 50.

When an individual gains one pound in weight he has consumed 3500 calories more than he actually needed. Therefore, an individual who eats nothing for 24 hours, and simply stays in bed, burns only 2200 calories and, therefore, loses only two-thirds of a pound in weight. To lose a pound a day, in addition to not eating, he must also walk approximately 13 miles. Losing weight includes, therefore, attention to caloric intake and physical activity. If one has to choose between the two, there is no question but that exercise alone is a most unsatisfactory way to reduce weight.

The ten commandments for weight control are in brief:

- (1) Retain the basic foods which supply the necessary proteins and vitamins.
- (2) Eliminate unnecessary fats and sweets.
- (3) Use judgment in the preparation of food, e.g., mushrooms (no calories) to decorate meat, strawberries or cantaloupe to make a dessert look good.
- (4) Do not skip meals, over-hunger is followed by over-eating.
- (5) Slice foods thinly. An ounce of sliced beef looks and tastes like a lot more than an unsliced ounce.
- (6) Eat slowly.
- (7) Taste your food as you eat it, the results are more satisfying.
- (8) Use a smaller than average plate, psychologically the meal looks larger.
- (9) Include food with a high satiety value.
- (10) Dieting may be forever. As one grows older, caloric demands decrease. Re-educate your eating habits.

It has been estimated that over two-billions of dollars are spent unnecessarily each year on weight reduction—exercises, massage, food fads, and anorexogenic agents. In an analysis of the treatment of obesity Feinstein² believes anorexians, psychotherapy and various drugs to alter the mood and consequently the appetite are all unnecessary. The main factor is the patient's enthusiasm in the effort to lose weight, his willingness to fight the discomfort and the temptations, and the moral courage necessary to stick to a rigid program. It takes this above any food plan, be it the popular 900 calorie canned-formula diet or any other widely advertised low calorie food. The recent spectacular success of the formula diet is evident to those who have watched the stock-market career of the stock of a certain reputable pharmaceutical house which has risen exceedingly rapidly, and now permits this company to sponsor a television series based on Winston Churchill's books and has furnished a trade name for jokes and stories, and perhaps has added a new word to our permanent vocabulary.

To end all publications on the subject, the assistant director of Professional Service for Research for the Veterans Administration

selected a popular nonmedical journal³ to carry his message to the lay readers.

Obesity is an everyday and continuing problem. The doctor in practice can be an advisor, a friend, and a kindly policeman and confidant, to that deserving individual, the obese man, woman, or child, who sincerely wants to revert his weight to normal limits.

A. W.

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TENNESSEE REPRESENTED ON IMPORTANT COMMITTEE

Time and again these pages have reminded us of the attacks leveled at the medical profession as a whole by organizations or by persons in government.

Some of the organizations have included great numbers of citizens, and thereby voters, whose officers or spokesmen have been successful in undermining the prestige and respect generally accorded a learned profession, and particularly one which touches the health of the Nation. The ulterior motives of these groups have been purely monetary selfishness or, in plain terms, the objective of avoiding medical bills and fees. Those in government who have attacked the medical profession have done so for the reasons obvious to all,—political aggrandizement. Taxes and illness have and will always be with us. Any political mountebank can attract an audience (and votes) if he promises relief from these two distasteful topics. Illness particularly is susceptible of being made a large political subject for it represents not only the actual loss of dollars, but also because of a deep-seated and natural rejection of illness.

The writers of the fourth estate have aided and abetted both pressure groups and politicians all too often, because of their need to play up the sensational and to fan

the embers of what readers wish to hear and reject—in this case the responsibilities of medical care for themselves and their dependents. The outcry in the press for relief from the cost of medical care is balm for the guilt felt by him who avoids responsibility or grudgingly cares for his dependents and family.

Though, as has been pointed out time and again, the interpersonal relationship of patient to doctor may not have deteriorated much, the respect for the medical profession as a whole is surely at a low tide. The doctor is portrayed, whether by press, politician or rabble rouser, as a cold, calculating, unsympathetic, dishonest, affluent, money-grasping person.

In the absence of a friendly press this is a most difficult situation to combat. This fact is most disturbing to every thinking physician, for the utter lack of confidence goes to the root of the Nation's health. If the word of those who know is suspect, it leaves matters of health in the hands of the political charlatan.

Recognizing the problem, it is of interest that resolutions were introduced into the House of Delegates by delegations from four widely separated states at the last session of the A.M.A. In essence, all called attention to the headlong pace of research and medical science and their application to practice, the speed of socio-economic change and its reflection in third party contracts, and the dishonest use of these matters for political or other ulterior reasons. These resolutions called for a careful "look" at communications between the public and the profession (A.M.A.). Certain of these resolutions emphasized the need for communication within the profession, all too often woefully but understandably lacking in the busy practitioner or in one whose special interests involve him in a society of specialists rather than in the larger body of the profession.

The reference committee considered these resolutions, wisely avoided what some had suggested—the employment of outside agencies—and concluded that the A.M.A. had within its organization a Division knowledgeable and competent to implement any program of communications. The Committee came forth with a resolution which

replaced the four state resolutions, directing the Speaker of the House to "name seven elected members of the House of Delegates as a special committee, the duties of which shall be to study and continually advise the Board of Trustees on the broad planning and coordination of all phases of communication of the American Medical Association, so that the public and the members of the medical profession are properly and adequately advised of the policies and concern of the medical profession with respect to all phases and aspects of medical care for all people."

To members of Tennessee's medical profession it should be most satisfying that one of its delegates has been chosen to serve on this most important committee. Dr. Smeltzer, of Knoxville, will bring to this committee's meetings clear and sensible thinking, backed by the confidence of the Tennessee State Medical Association in his ability to see and understand the problems it will need to consider. Dr. Smeltzer's name was certainly a most happy selection.

An established committee composed of executive secretaries of State Medical Associations has acted in an advisory fashion to the A.M.A. Communications Division for some years in the area of communications and public relations. It is again a matter of satisfaction that our Executive Director, Mr. Jack Ballentine, has been appointed to this committee.

R. H. K.

Special Article

Medical Requirements and Financial Resources of the Aged*

Leonard W. Martin, Ph.D., Chicago, Ill.

Director Legal and Socio-economic Division,
Department of Economic Research of the A.M.A.

Interpretation of data is, to say the least, a tricky subject. Rarely is knowledge or its quantification complete. Consequently available data are usually fragmentary, and interpretation of them must be made cautiously. Moreover, certain arrangements and selections of data may produce results which differ from other arrangements and selections. In this paper I shall review four

*Read at the meeting of the Knoxville Academy of Medicine, May 24, 1961, Knoxville, Tenn.

of the opposition's faulty uses of data with respect to the medical care requirements and financial resources of those 65 or over. After that review, I shall present the most recent data portraying as accurately as possible the picture of the aged's medical and financial position.

Faulty Uses of Data

Perhaps the most famous of the various "facts" employed by the opposition is that 60 percent of those 65 or over have incomes of \$1,000 a year or less. Personally I think this matter was disposed of quite thoroughly in an article which a few of us published in *JAMA* on October 31, 1959. I quote as follows:

"Repeated again and again is the statement that about three-fifths of all persons 65 years or older had less than \$1,000 money income in 1957. . . .

"Let us accept this statistic as a fact. Indeed those who repeat it appear to accept it without question and to consider that it speaks for itself. This statistic, combined with the assumption that income is a sufficient measure of financial status, implies that the aged as a group suffer from poverty and privation because of their low income in a generally prosperous society. The implication can be questioned if one points out an equally accurate statistic, namely, that in 1957 almost one-half of all persons over 14 years of age also had incomes of \$1,000 or less per year. Looking further one finds that 47 percent of all persons between the ages of 14 and 65 had incomes of \$1,000 or less per year in 1957. [Similarly, 64 percent of those under 65 had money incomes of \$1,000 or less. Seventy percent of married women of all ages had zero income in 1958, according to this method of arranging data.] Yet, it also is true that the median family income in 1957 was approximately \$5,000 per year.

"Can all these things be true? Can there be a median family income of \$5,000 per family while almost one-half of all persons earn \$1,000 or less per year? The answer is yes. . . .

"The important fact to be remembered is that the money income figures [those pertaining to income of \$1,000 or less per year] . . . refer to individual and not to family income. In other words, let us imagine that a club is composed of a number of persons and their respective husbands or wives and that the conditions of membership in the club are (1) that only one member of each family be an income earner and (2) that the average income per family be in excess of \$20,000 per year. This is the club. By using the same statistical technique or formulation as that

employed by the Department of Health, Education, and Welfare, one-half (50 percent) of the members of that club have incomes of less than \$1,000 per year (zero incomes, in fact) and, so long as the same conditions exist, will continue to have zero incomes even though the average income per person for the club has to be, by the very conditions of membership, in excess of \$10,000 a year. [Put in other words, such an arrangement of data does not classify married women (supported by their husbands) in accordance with a proportionate share of their husbands' incomes.]

"All of this leads to the conclusion that money income of the aged population, arranged on a per capita basis, is an insufficient and misleading measure of financial status."

A more appropriate measure of the aged's financial status would be family resources including money income, non-monetary income, assets and other resources.

Another favorite assertion is that 77% of people 65 years of age and over have chronic ailments and the percentage increases to 83% for those 75 and over. Although these figures are admittedly impressive, it is important to find out what they mean and how one defines chronic ailment. Among the chronic ailments are diabetes, peptic ulcer, arthritic rheumatism, asthma, hay fever, chronic bronchitis, visual impairments and need for hearing aids.² Many of us, you probably realize, suffer from chronic ailments and experience no limitation of activity, limitation of mobility or limitation of earning power. Thus, although it is true that 77% of those 65 and over have chronic ailments, only 14% consequently experience any significant limitation of activity, and only 5% incur any major limitation of mobility as the result of chronic illness.² A very careful study of chronic illness found that only 3% of interviewees whose normal activity was work suffered any decrease in "financial independence" as a result of "medically disabling conditions."³ Those who sensationalize the high percentages pertaining to chronic ailments are those who tend to ignore the difficulties involved in defining the term and ignore as well the lack of meaningfulness attached to it. In contrast Mortimer Spiegelman has pointed out that with respect to chronic conditions, acute conditions and disability, "no consensus has been reached on the definition of any of these terms."⁴ The figures on chronic ailments,

however impressive and sensational, tell almost nothing about the medical condition and financial position of people in our society, aged or other.

How rashly inferences can be drawn from raw data is demonstrated ably by Ann and Herman Somers in their new book entitled, *Doctors, Patients and Health Insurance*. They say:

"Thus far, however, the system [voluntary health insurance] offers no protection of any sort to 28 percent of the civilian population, some 49 million people. In the main these are the aged, the disabled, the low-income workers and the unemployed—those who need protection most but are unable to meet premium costs." (pp. 11-12)

As you see, the inference is drawn immediately that the 49 million people who do not have voluntary health insurance are without its protection simply because they are unable to pay the premium charges.

However, the Health Information Foundation through the Shanas studies, to which I shall refer at greater length later, has examined data for 1957 on those aged with and those aged without voluntary health insurance. Of all the aged surveyed, less than 3% had tried to obtain health insurance and had been turned down. (Among those rejected, 2 of 3 were turned down because they were too old and nearly 1 of 3 because of a specific health complaint.) Of those uninsured at the time of the survey, about half claimed they couldn't afford it. Another one-fourth of those who did not have health insurance said they had never thought about it; and just less than one-fourth said they did not want it.⁵ Further comment on "cannot afford" will be presented later.

The Somers' effort to discredit voluntary health insurance because some people do not want it and hence do not have it, suggests some bias against the voluntary approach. Their untenable inference, moreover, that all those who do not have voluntary health insurance are unable to afford the premiums is explicitly contradicted by the Shanas data. With respect to this assertion the Somers are approximately 50% wrong—a failing grade in any scholarly test.

Another criticism of voluntary health insurance is that relatively few of the aged

obtain benefits through it. Thus a report on a 1957 survey of beneficiaries by the Bureau of Old Age and Survivors Insurance of the Social Security Administration stated that "relatively few—14% of the couples and 9% of the non-married beneficiaries—had any of their [total medical care] expenses covered by insurance."⁶ Now there are various types of voluntary health insurance. There is that which provides benefits for hospital care, that for surgical care, that for home and office calls, that for catastrophic cases and perhaps that for some special illnesses. It is a peculiar feature of voluntary health insurance—and a rare one which it has in common with compulsory health insurance—that one has to consume medical care in order to receive a benefit. Hence in the case of hospital benefit insurance the holder of insurance must experience a hospital stay in order to receive a benefit. Evidently this profound discovery may escape the experts.

The alleged poor performance of voluntary health insurance may be interpreted more appropriately as evidence of the good health of the aged. Further analysis of the data in this study reveals that 87% of all OASI non-married beneficiaries and both members of 80% of all OASI beneficiary couples did not enter a general hospital during the survey period. Thus one or both members of only 20% of all beneficiary couples and only 13% of all non-married beneficiaries used a general hospital in 1957. Taken individually, 89% of all surveyed beneficiaries, married and non-married, did not enter a general hospital during 1957.⁶

The survey reports include distributions on those hospitalized and on those insured, but they do not state the percentage of hospitalized persons who had insurance or who received insurance benefits. However, we have determined, through the data provided in the study, that 55% of those hospitalized had hospitalization insurance. Although a great deal of emphasis was placed on the financial burdens of hospitalization, the reports did not relate those receiving benefits to those actually hospitalized. Instead they preferred to relate those receiving benefits to all aged beneficiaries,—both couples and non-married, concluding that only 14% of the couples and 9% of the non-married bene-

ficiaries received any insurance benefits. When the data are interpreted in terms of the appropriate relationships, it would seem that voluntary health insurance is performing well.

Medical Requirements of the Aged

So much for faulty use of data. Let us next review some basic data on the medical and financial conditions of the aged. It is generally recognized that the aged have a lower incidence of acute disease but a higher incidence of chronic disease. According to the National Health Survey for the period July, 1957 to June, 1958, the incidence of acute conditions among persons aged 65 and over of each sex was approximately three-fifths of that for younger persons. Thus, for females the annual incidence of acute conditions was 282 per 100 persons at ages under 65, but at the higher ages the rate was only 169 per 100.⁷ However, the proportion of older persons with some chronic condition was at least double that recorded at the younger ages. For example, chronic conditions were reported, at ages 65 and over, by 75% of the men and 81% of the women, compared with 36% and 40% respectively for the lower ages.² But, as already indicated, not all of these chronic conditions are of major significance; the matter of chronic disease can be seriously exaggerated. Most commonly it involves little or no limitation of activity and even less limitation of mobility. As a matter of fact, most people with a chronic condition continue to work productively.

It is true that the aged require approximately twice as much hospitalization as those under 65. According to the National Health Survey of short-stay hospitals, utilization amounts to 0.85 days per person per year for those of all ages and 1.78 days per person per year for those 65 and over.⁸ Expenditures on medical care are also believed to be higher for the aged. Thus, the Health Information Foundation estimates in a 1957-58 survey, that those 65 and over spend approximately \$177 per person per year on medical care while those of all ages spend \$94 per year.⁹ In brief the aged experience fewer acute diseases, more chronic ailments, greater hospital utilization and

higher expenditures on medical care than do younger people.

In general, however, the aged consider their health to be good. According to two surveys, the aged reported their health to be fair or better in 77 to 89% of the cases. During the four weeks preceding the respective surveys, 67 to 73% had no physician contact. Ninety-four to 98% reported no unmet medical needs simply because of financial reasons.¹⁰ One survey reported that during the course of the previous year 61% of the aged spent less than \$100 on medical care.¹¹ Ninety-six percent of the aged had no medical debt and only 1% had \$200 of debt overdue according to two different studies made eight years apart.¹² In another study, 46% of the aged reported good health, 44% had complaints and diseases which did not interfere with physical functions and only 10% were very sick.¹³ Thus, the health picture of the aged insofar as it can be quantitated is good, despite the efforts of sensationalists to distort and misrepresent the data.

Financial Position of the Aged

Remembering that the aged are not a homogeneous group, let us next look at their financial position very briefly. The full-time aged male worker earns on the average as much as his counterpart 20 to 24 years of age and the aged's family responsibilities and tax liabilities are considerably less. For year-round full-time male workers, median income in 1959 was \$3,721 for those 20 to 24 and \$3,977 for those 65 and over. The median income for all year-round full-time male workers aged 14 and over was \$5,242. For aged women the picture was not as favorable. The median income for women 20 to 24 was \$3,075 and for those 65 or over, \$2,266. Between 1951 and 1959, moreover, median incomes of aged men increased 56% whereas those of all men 14 and over rose only 35 percent.

Referring back to the alleged 60% of the aged with incomes of \$1,000 or less per year, permit me to point out that of 6,193,000 families, with its head aged 65 or over, median family income in 1959 was \$2,831. Of 3,632,000 unrelated individuals, 65 and over, median income was approximately \$1,000.¹⁴ When the data are viewed in this manner,

allowing a proportionate share of the earner's income to the dependent, it is apparent that many more than 40% of the aged have annual incomes of \$1,000 or more.

Little effort is made to deny the relatively favorable asset position of the aged. In 1957 over 70% of aged OASI beneficiary couples owned their own homes; and 87% of the homes owned by OASI beneficiaries were mortgage free.¹⁵ Review of percentages of aged spending units with liquid assets shows the aged to be in a relatively good and improving position. In 1949, 68% of the aged had some form of liquid assets; 50% had liquid assets of \$500 and over, 30% \$2,000 and over, and 15% \$5,000 and over.¹ By early 1960, 70% of the aged had some form of liquid assets, 56% had \$500 and over, 41% \$2,000 and over, and 22% had \$5,000 and over.¹⁶ With rare exception the liquid asset position of other age groups was not as favorable. The net worth of aged (OASI) beneficiary couples rose from \$5,610 in 1951 to \$9,620 in 1957.¹⁷ Generally the aged own more kinds of assets and own them in greater quantities than other age groups in the population. Not only are the aged reasonably well off financially, but their condition is improving rapidly and steadily.

Despite these generally favorable conditions regarding their health and their financial well being, how well able are the aged to cope with their medical bills? Analysis of this matter can be made in at least two ways. The Health Information Foundation on the one hand asked the aged their opinion on this subject.⁴ The aged were asked what would happen if they were faced suddenly with a medical bill of \$500. Twenty-seven percent of them said "they just couldn't pay" and 29% more said they would find it "very difficult." Thus, about 56% would appear to be in this category. However, in another part of the survey the aged were asked more objectively what funds they would have available to pay a medical bill of \$500. In this case more than one answer could be given. Even so only 9.6% said they "could not pay such a bill," while 8.2% said "they would need public assistance or charitable aid."¹⁸ I think it is interesting to observe that 44% of the aged were of the opinion, i.e. subjectively, that

they would be able to pay a bill of \$500, while 82.2% of the same survey group, more objectively, were able to cite the private resources available to pay such a bill.

It must be emphasized that such terms as "can afford" and "cannot afford" are subjective, not objective. In our free economy one person can afford medical care, another one can afford a television set and so on. What one can afford is largely a matter of his own subjective consumption preferences. I would very much like to see the Health Information Foundation's data on those aged who have, and those aged who do not have health insurance categorized by income or some other measure of financial resources. I am confident that these distributions would reveal that some of those who say they cannot afford health insurance have greater financial resources than some of those who own health insurance. This brief exploration of the meaning of "can afford" or "cannot afford" should help to clarify some of the data on the subjective ability of the aged to pay for medical care as well as on their ability to pay for or purchase health insurance.

A substantial number of those 65 and over own some form of health insurance. Indeed, the percentage of all those 65 and over having health insurance approximately doubled, from about 26% in March, 1952¹⁹ to 49% by January, 1960.²⁰ In view of this rapid growth in eight years, there is good reason to believe that it has continued, so that today 50% or more of all those 65 or over have some form of health insurance. We know, moreover, that some (perhaps 25 to 30%) aged people are not in the market for health insurance, since provision for their medical care is made in some other way.²¹ Hence, we can safely conclude that 70% of the aged who are in the market for voluntary health insurance have it.

In the context of a discussion of insurance provision for retirement, Morton Miller of the Equitable Life Assurance Society attempted to estimate the portion of retirement cost that would have to be assigned to health insurance.²² Realizing that this was a fairly complicated matter, he nevertheless made some estimates. He concluded.

"An equal proportion or another 5 percent of the total [retirement cost] would provide

for a reasonable basic hospital and surgical insurance expense plan for pensioners and their dependents. The broader plan of comprehensive major medical benefits for retired employees and their dependents would cost about twice as much or about 10 percent of the total retirement cost."

These estimates agree quite well with general experience to the extent that expenditures on medical care normally account for approximately 5% of all consumption expenditures, and the experience that aged people do spend more on medical care than those of younger ones. If the retired person will use voluntary health insurance, either in the form of basic or major medical coverage, apparently he can on the average finance his medical care by an outlay of 5 to 10% of his total retirement expenditure.

Summary and Conclusion

In brief review, I decline to adopt the sort of extreme position the opposition has often presented. I would not argue that all of the aged are affluent, healthy people with negligible expenditures on medical care. However, I deny that age can be identified with either poverty or with totally disabling illness. It is more reasonable, as well as more accurate, to say that not all of the aged are ill and to admit that not all of the aged are well than to say that not all of the aged are poverty stricken and to admit that not all of the aged are wealthy. We recognize that for some of the aged payment for medical care can constitute a problem. We are fully convinced, however, that proponents of intervention by the federal government in the provision of medical care have grossly exaggerated the magnitude of this problem. Superior alternatives, which increasingly cope with the existing limited problem, are found in voluntary health insurance for the great majority of the aged and of all citizens and the Kerr-Mills Law and OAA for a minority of the aged. To change social security radically from cash to service benefits, to threaten the social security program with a substantial and certainly an increasing burden,²³ to increase the taxes of all workers covered by social security, to impose onerous controls on medical and allied professions, and ultimately, to reduce the quality of medical care in the United States in order to solve

this minor problem is like burning down one's home to roast a pig.

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DEATHS

Dr. Joseph Haynes Francis, 69, Memphis, died on September 3rd in a Chicago Hospital.

Dr. N. E. Leake, Memphis, died on September 20th. He was a Veteran Member of the Association.

Dr. Fountain Bruce Hulme, 77, Pulaski, died on September 10th in the Giles County Hospital.

Dr. Thomas Volney Woodring, 70, Nashville, died September 2nd at St. Thomas Hospital as the result of a heart ailment.

Dr. Willard J. Irwin, 52, Knoxville, died September 12th at Presbyterian Hospital. He was an ear, nose and throat specialist.

Dr. Sam L. Wiles, 76, Murfreesboro, died August 30th in the Rutherford County Hospital.

Dr. Henry James Roberts, 45, formerly of Memphis, died September 11th in Los Angeles, California.

Dr. William F. Price, 82, Viola, died August 6 in a Chattanooga hospital.

PROGRAMS AND NEWS OF MEDICAL SOCIETIES

Chattanooga-Hamilton County Medical Society

The Society conducted its September meeting jointly with the Tennessee Valley Medical Assembly on September 25-26 at the Read House in Chattanooga. The following speakers and their subjects were:

Owen H. Wangenstein, M.D., Professor of Surgery, University of Minnesota, Minneapolis, "Local Gastric Cooling in the Control of Massive Gastric Hemorrhage"; Morris J. Nicholson, M.D., Lahey Clinic, Boston, "Circulatory Emergencies Occurring in the Operating and Recovery Rooms"; T. L. L. Soniat, M.D., Head, Dept. of Neurology, Ochsner Clinic, New Orleans, "Common Office Neurologic Problems Seen by the General Practitioner"; Amos R. Koontz, M.D., Asst. Professor Emeritus of Surgery, Johns Hopkins University, Baltimore, "Recurrent Hernia"; Sydney Gellis, M.D., Professor and Chairman, Dept. of Pediatrics, Boston University, Boston, "The Odd-Looking Child"; Ovid O. Meyer, M.D., Professor of Medicine and Chairman, Dept. of Medicine, University of Wisconsin, Madison, "Newer Drugs and Their Uses"; Willis E. Brown, M.D., Professor and Head, Dept. Obstetrics and Gynecology, University of Arkansas, Little Rock, "Chronic Pelvic Pain, Its Cause and Treatment"; Victor F. Marshall, M.D., Professor Clinical Surgery (Urology) Cornell University, New York, "The Accuracy of the Diagnosis of the Causes of Uremia"; Robert J. Boucek, M.D., Howard Hughes Medical Institute, Miami, as live Medical Narrator for film: "Blood Fractions in Clinical Medicine"; B. L. Martz, M.D., Associate Professor Medicine, University of Indiana, Indianapolis, "Present Concepts of Etiology and Management of Hypertensive Disease"; Michael DeBaKey, M.D., Professor and Chairman, Department of Surgery, Baylor University, Houston, Texas, "Clinical Patterns of Arterial Occlusive Disease"; Robert G. Heath, M.D., Professor and Chairman, Dept. Psychiatry and Neurology, Tulane University, New Orleans, "New Leads into the Nature of Schizophrenia"; Neil Swinton, M.D., Lahey Clinic, Boston, "The Present Status of the Relationship of Cancer of the Colon and Rectum to Polyps"; J. William Littler, M.D., Associate Clinical Professor, Surgery, Columbia Presbyterian Hospital, New York, "Secondary Flexor Tendon Repair"; John M. Waugh, M.D., Head of Section and Professor Surgery, Mayo Clinic, Rochester, "Palliative and Curative Procedures in the Management of Carcinoma of the Ampulla of Vater and Pancreas"; George E. Shambaugh, Jr., M.D., Professor and Chairman, Dept. of Otolaryngology, Northwestern University, Chicago, "The Therapy of Bell's Palsy"; James Barrett Brown, M.D., Professor Clinical Surgery, Washington Uni-

versity, St. Louis, "The Direct Management of Compound Facial Injuries"; Theodore E. Woodward, M.D., Professor and Head, Department of Medicine, University of Maryland, Baltimore, "Specific Microbial Causes of Cardiac Diseases, Including Virus Etiology."

Roane County Medical Society

The Society conducted its regular monthly meeting on September 19th in the dining room of the Oak Ridge Hospital. The scientific program was presented by the guest speaker, Dr. Asa Barnes, Area Administrator of the U.M.W.A., Louisville, Kentucky. His subject was "Attitudes of Organized Labor and Management on Prepaid Medical Care." The meeting was preceded by a dinner.

Memphis-Shelby County Medical Society

The regular monthly meeting of the Society was held on July 5th in the Institute of Pathology. The scientific program was presented by Dr. Robert McBurney. The program consisted of the following: "Strongyloidiasis" by Dr. A. M. Lefkovits and Mr. Lawrence Jackson; and "Fenestration of the Oval Window" by Dr. John J. Shea, Jr. The excellent well-illustrated presentations, were enjoyed by those present.

Blount County Medical Society

At the meeting on August 24th, the Society was addressed by Dr. Robert T. Clark, Dean of the School of Arts and Sciences of Oklahoma City University. His subject was "Physical Fitness in the Space Age." The meeting was conducted in the Blount Memorial Hospital.

Sullivan-Johnson County Medical Society

The Society met on September 14 at the Ridgefield Country Club in Kingsport. The scientific program was presented by Dr. William Hillman, chief of orthopedics at the Vanderbilt University School of Medicine, Nashville.

Marshall County Medical Society

The regular monthly meeting of the Marshall County Medical Society was conducted at the Southland Cafe in Lewisburg on August 21st. A representative of the G. D.

Searle Company showed a film on the recent progress in understanding the physiology of the kidney.

Nashville Academy of Medicine and Davidson County Medical Society

The Society began its regular series of fall meetings on September 20th with a dinner meeting at the Baptist Hospital in the Medical Auditorium.

A panel discussion of "Prepaid Health Insurance," with Dr. Walter Diveley moderating, was presented by Dr. Gilbert Roberts, Jr., Chattanooga; Mr. Clyde Groover, Jr., Dr. James A. Kirtley, Jr., and Dr. Addison B. Scoville, Jr.

At a called meeting of the Society conducted on August 1st, the Academy officially censured Dr. Roy R. Bowes, after sustaining charges that he had failed to exemplify the standards to which a physician is expected to adhere, as demonstrated by his plea of guilty to a charge of income tax evasion.

Consolidated Medical Assembly of West Tennessee

The Society met on September 5th in the New Southern Hotel in Jackson, where the scientific program was presented by Dr. Blair Erb. The subject was "Cardiac Resuscitation."

Occupational Health Council

TSMA's Chairman of the Committee on Occupational Health, Dr. George E. Duncan, Nashville, attended the meeting for State Committee Chairmen sponsored by the AMA and conducted in St. Louis. Highlights of the meeting were as follows:

1. In treating an industrial case, the physician is neither on the side of management or labor. His main function is that of a doctor practicing the best medicine he can, interested primarily in the rehabilitation of his patient. He handles the case just as he would a private patient, employing consultations as needed.

2. Health services in large and small industries alike, without question, have channelled patients to private physicians that would not have otherwise gone. These health services, which are increasing all over the country, are organized chiefly for preventive medical measures. By being

where the patients are, through physical examinations, etc., they discover disease in its early stage. Health services in industries are justified in doing definitive "work-ups" in certain cases but, in general, are not to treat diseases when found.

3. It takes 50,000 x-ray pictures properly obtained to produce harmful irradiation in a patient. The patient gets less exposure by a 17 x 14 chest film than he does from a 5 x 7 x-ray film.

4. Figures show that the compensation case loses twice as much time from work as does the nonindustrial case of the same type.

5. Full-time health services reduces loss of time from injury.

6. Physicians should interest themselves in job placement rather than have rigid physical requirements which keep capable people out of work.

7. Industrial medical records should be confidential.

NATIONAL NEWS

The Month in Washington

(From the Washington Office, AMA)

The Senate and House approved a multi-million dollar expansion of federal aid to community health services.

The Senate approved it by routine voice vote a few weeks before adjournment. The House earlier had approved a slightly different form of the legislation. No difficulty was anticipated in adjusting the differences of the two versions so that it could become effective at an early date.

Some of the programs covered by the legislation were of special importance to the aged and the chronically ill. Key provisions of the bill would:

—Raise from \$30 to \$50 million, for five years the annual authorization for matching grants to states and cities for public health services such as home nursing, home health care and a variety of services to nursing homes.

—Establish a five-year \$10 million-a-year program of special grants to non-profit groups for research and development aimed

at improved health services given outside the hospital.

—Raise from \$10 million to \$20 million the annual authorization for construction of public and non-profit nursing homes.

—Extend loan provisions for hospital construction under the Hill-Burton Act until its grant program expires in June 1964.

—Raise from \$1.2 million to \$10 million the annual ceiling on grants for hospital research and permit grants for experimental or demonstration hospital units.

—Extend for three years the matching grant program which provides federal help for construction of health research facilities and authorize \$50 million rather than \$30 million a year.

Influenza Epidemic Predicted

Dr. Luther L. Terry, Surgeon General of the U. S. Public Health Service, predicted that there will be a new influenza epidemic in the United States this fall and winter.

He urged immediate vaccinations for people over 65, pregnant women and persons with heart diseases and other chronic illnesses.

"We are probably due for some Asian influenza outbreaks, since they come in two or three year cycles," Terry said, "and we are overdue for type B flu outbreaks which come in four to six-year cycles."

More than 86,000 people in the three most susceptible groups died from influenza between September 1957 and March 1960. Asian influenza has been dormant in this country since then. It has been more than six years since "type B flu" has been widespread.

Both types of influenza were prevalent in other countries in 1960-61, especially in England. In 1951, when England had a similar epidemic, influenza reached this country the following year, Terry noted.

The U. S. Public Health Service is alerting physicians, state health officers and welfare agencies to include "flu shots" in their programs of public assistance.

Live Virus Polio Vaccine Licensed

The Type I oral, live virus polio vaccine developed by Dr. Albert Sabin has been licensed by the U. S. Public Health Service for marketing in the United States.

However, the PHS, the American Medical Association and others urged that the widest possible use still be made of the Salk killed vaccine. The principal use of the newly licensed oral vaccine this year will be against epidemic threats of Type I polio.

The license for manufacture of the oral vaccine was granted to Pfizer, Ltd., Sandwich, England, and it is being marketed in this country by Chas. Pfizer & Co., Inc., of New York.

Dr. Luther L. Terry, Surgeon General of the PHS, said he expected Type II oral vaccine to be licensed soon but that it would be several months before Type III would be licensed.

Pfizer is expected to have more than 50 million doses of the Type I oral vaccine available for use by next spring at the start of the 1962 polio season. For an epidemic reserve, the PHS ordered at the time of the licensing a total of 900,000 doses of the Type I vaccine in frozen form at a cost of \$81,000.

Information on the terms of obtaining vaccine from this epidemic reserve was sent to State and Territorial Health Officers. The requirements include:

At least three cases of Type I polio in the community within a month, of which two have been confirmed to be Type I by laboratory analysis.

Adequate community organization and medical leadership to insure rapid and complete coverage of the population under 50.

Agreement to make the vaccine available without charge to persons under 50.

All local requests must be channeled through State health departments.

Of the three types of polio virus, Type I has been responsible in recent years for between 60 and 70 per cent of all paralytic polio in this country, PHS said. However, a sampling of virus isolated from paralytic cases this year suggests that Type III may be increasing in relative importance as a cause of paralytic disease.

Dr. Terry attributed "the progressive decline in polio since 1955" to the Salk vaccine. He said that through August 5 only 234 paralytic cases had been reported this year, as compared "with 13,850 for the polio season of 1955, the first year in which the Salk vaccine became available in limited quantities."

The AMA said the licensing of live virus vaccine marked "another step forward" in the fight against polio. The Association predicted the new vaccine would be "a valuable weapon against epidemics of Type I polio." However, the AMA again urged that everyone complete a series of Salk shots.

"Until such time as oral vaccines against all three types are available, the Salk vaccine remains the only protection available against all types of paralytic polio," the AMA said.

MEDICAL NEWS IN TENNESSEE

Woman's Auxiliary to TSMA

Legislative Conference and Workshop

The TSMA Woman's Auxiliary recently conducted a workshop at a meeting of their Board in Nashville. The format of the legislative conference was as follows:

1. Introductory Remarks—Mrs. A. Hoyt Crenshaw, Chairman, Committee on Legislation
2. Panel Discussion: POLITICAL ACTION IS EVERYONE'S BUSINESS

Moderator: Mrs. Joseph D. Anderson, Member, Advisory Council and Past-President

Panelists: Mrs. Roy A. Douglass, Area Chairman for Legislative Activities, Woman's Auxiliary to AMA
Mr. Dan E. McGugin, Jr., Chairman, Political Action Committee, Nashville Chamber of Commerce
Mr. John Pompelli, Field Representative, AMA Field Service Division, Chicago
Douglas H. Riddell, M.D., Chairman, TSMA Committee on Legislation and Public Policy

3. Explanation and description of legislative materials: Mr. Jack Drake, TSMA Public Service Director
4. Buzz Session—Questions from group directed to panelists
5. Informal question and answer session.

New Hospital at Waverly

Dedication of Waverly's Nautilus General Hospital was recently held. The 300,000 facility occupies 13,000 square feet and contains 30 beds and a closed circuit television system.

Vanderbilt University School of Medicine

A federal grant of \$185,000 has been approved for additions to the diagnostic and treatment facilities at Vanderbilt University, it was recently announced. The funds will be used primarily for enlargement of x-ray facilities.

University of Tennessee College of Medicine

A \$19,095 grant to the University of Tennessee Memorial Research Center in Knoxville, will advance study in the field of allergies and infectious diseases. The grant was made by the U.S. Department of Health, Education and Welfare.

★

The U. S. Public Health Service has awarded a \$43,758 research grant to Dr. Audrey N. Roberts, the money to be used to conduct a basic research program in the development of immunity in the body. The study will last three years.

★

The addition of nine full-time physicians to the staff of the College of Medicine has been announced. They include: Drs. Julio Goldenberg, Stanley B. Kaplan, David Mills, Charles B. McCall, Charles L. Neely, Jr., Lester R. Graves, Jr., Sam Patterson, John A. Harbinson and William H. Lee, Jr.

★

Eleven postgraduate courses for physicians, twelve for dentists and one for pharmacists will be or have been offered by the postgraduate department of the University in Memphis from September through June. The programs are as follows:

Radiology, October 9-13; Obstetrics and Gynecology, October 18-20; Fluid and Electrolite Therapy in Pediatrics, February 28-March 2, 1962; Recent Advances in Therapeutics, March 14-16; Otolaryngology, March 29-30; Dermatology, April 25-26; Orthopedics, May 2-4; and Psychiatry, May 23-25.

★

The College of Medicine plans to develop an "honors program" by which an especially gifted student is afforded special attention. The program will be developed by Dr. Frank L. Roberts, associate dean. Dr. Roberts is formulating plans whereby prospective stu-

dents will be interviewed by a representative of the college prior to admission. "The appraisal will help the college in its evaluation of applicants," Dr. Roberts stated.

New Grant Assures UT Expansion

Expansion of facilities of the University of Tennessee Memorial Research Center at Knoxville became a virtual certainty recently with the announcement of a \$38,000 grant from the state.

The announcement climaxed a drive to raise \$375,000 with which to match federal funds for the addition. The proposed addition calls for constructing a \$750,000 structure, containing 47,000 square feet of space to be devoted primarily to clinical research. Dr. McChesney Goodall, medical director, has estimated the additional space will enable UT scientists to receive some \$500,000 annually in federal and foundation grants for research which currently is limited due to lack of space. Existing research facilities contain only about 13,000 square feet which greatly cramps scientists in basic and clinical research activities.

PERSONAL NEWS

Dr. Joseph W. Johnson, Jr., Chattanooga, has been re-appointed to an eight-year term on the Board of Trustees for the Mental Health Department.

Dr. T. R. Ray, Shelbyville, has been re-appointed by the Governor to serve a three-year term on the Public Health Council.

Dr. Stanley Crawford, Jackson, was a recent guest speaker at the Consolidated Medical Assistants of West Tennessee, at a dinner meeting in Jackson.

Dr. Jerry T. Francisco, Memphis, has been named a diplomate of the American Board of Pathologists.

Dr. David Slagle, Elizabethton, has been elected chief of surgery at Carter County Memorial Hospital.

Dr. James L. Moore, McMinnville, has opened his office for the practice of medicine and surgery in McMinnville.

Dr. John Crowell, Chattanooga, was the speaker at the regular meeting of the East Lake Lions Club.

Dr. Fred K. West, Rossville, was recently honored by the people of Rossville and the surrounding area following the career of a typical rural doctor.

Dr. Alvin J. Ingram, Memphis, has been named head of the medical division for the Shelby United Neighbors Campaign.

Dr. E. E. Miller, Knoxville, was the recent guest speaker at the Harriman Rotary Club.

Dr. Harmon L. Monroe, Erwin, recently participated in a panel discussion before the Kiwanis Club.

Dr. James H. Williams has joined the staff of the Milan Hospital.

Dr. Jack Duley, Columbia, spoke on the subject of the effects of "fall-out" at the Rotary Club.

Dr. A. Roy Tyrer, Jr., Memphis, spoke on the subject "Brain Surgery" before the West Tennessee District of the American Physical Therapy Association.

Dr. William H. Hatfield, Memphis, discussed "Fibrocystic Diseases of the Pancreas" at the Memphis Association of Medical Record Librarians.

Dr. Tom Holder, Maryville, has opened his office in the Medical Arts Building and is associated with **Dr. H. L. Isbell**.

Dr. Jack Adams, Chattanooga, spoke on the subject "Instrumentation in the Medical Field" at a recent meeting of the Chattanooga Section of the Instrument Society of America.

Dr. A. F. Ebert has announced the association of **Dr. Alfred P. Rogers** in the practice of surgery in Chattanooga.

Dr. E. Calvin Moore, assistant superintendent of the New Jersey Neuro-Psychiatric Institute at Princeton, will become superintendent of the Central State Hospital in Nashville on November 1st. He will succeed **Dr. O. S. Hauk** who has served as superintendent of the Institution since 1939.

Dr. Robert Earl Keith, Church Hill, has accepted a position on the medical staff of Tennessee Eastman Company in Kingsport.

Dr. Wm. O. Vaughan, Nashville, President of TSMA, was the principal speaker for the recent Convention of the Tennessee Nursing Home Association.

Dr. Richard L. Hobart, Knoxville, has been elected President of the Powell Optimist Club.

Dr. Edward W. Kelman, Maryville, was the recent guest speaker for the Maryville Rotary Club.

Dr. Phil Orpet, Jr., Memphis, was the principal speaker at the recent meeting of the Memphis Sertoma Club.

Dr. M. D. Davis, Chattanooga, was one of the forty-nine physicians recently honored at University of Tennessee Medical Units in Memphis.

Dr. M. M. Young, Crossville, has been awarded a fellowship by the U. S. Public Health Service for graduate study in public health administration.

Dr. Henry Lyons, Rogersville, has been appointed assistant company surgeon for the Southern Railway System.

Dr. Ben J. Alper, Nashville, and **Dr. Robert Terry**, Nashville, recently participated in ceremonies where presentation for distinguished service was made by the Middle Tennessee Chapter of the Arthritis and Rheumatism Foundation.

Chattanooga physicians participating on radio

and TV programs, sponsored by the Chattanooga-Hamilton County Health Council, were: **Dr. Merrill Nelson**, **Dr. W. Powell Hutcherson**, **Dr. Robert E. Baldwin**, **Dr. Julian Adams** and **Dr. Jack Tepper**.

Dr. Howard T. Simpson, formerly practicing in Jackson, has located with the Oak Cliff Psychiatric Clinic, Dallas, Texas.

Dr. William T. Slonecker has joined **Dr. Lowry Dale Kirby** of Nashville, in the practice of pediatrics.

BOOK REVIEW

The Older Patient. Edited by Wingate M. Johnson, M.D., Professor Emeritus of Clinical Medicine, Bowman Gray School of Medicine. 564 pages. New York, Paul B. Hoeber, Inc., 1960. Price \$14.50.

From some standpoints geriatrics may approach a subspecialty of internal medicine bearing the same relationship to it as possibly pediatrics. The aged patient receives more consideration these days because he appears in greater numbers and is subjected to surgical and other procedures not considered in past generations.

This book then represents a kind of textbook for geriatrics, logically considering the anatomic and physiologic changes of aging, the nutrition of the older patient, and his variance in diagnosis and treatment. Following these introductory chapters, the rest of the book is given over to a consideration of the diseases of the various body systems from the standpoint of the older patient. Your reviewer believes that the time is at hand for the doctor to have on his bookshelf a volume devoted to the variations of disease and its management in the elderly patient.

Medical Pharmacology. Principles and Concepts. By Andres Goth, M.D., Professor of Pharmacology and Chairman of the Department of Pharmacology, University of Texas Southwestern Medical School, Dallas. 522 pages. St. Louis: The C. V. Mosby Company, 1961. Price \$11.00.

This is an attempt by a basic scientist to streamline his subject material so it has maximum usefulness and appeal to those in clinical medicine. The material is organized and arranged to insure easy and rapid reading. All graphs and diagrams are schematic and highly effective. All classes of drugs are covered. Each chapter begins conventionally with a survey of the general properties of the class of drug concerned followed by a description of each specific drug. The reader is spared the innumerable technical terms which make reading the larger pharmacologic textbook so labored; such as, solubility and absorption coefficients, vapor pressures, etc. Complex metabolic schemes are avoided. Wherever possible the author emphasizes therapeutic applications, often

pointing up common fallacies in the way the drugs are used.

The book is not an encyclopedia. The references are quite brief composed only of key articles. The palatability of the author's style makes it quite easy, even entertaining in some sections for the clinically oriented reader to reinforce his pharmacologic background.

ANNOUNCEMENTS

Postgraduate Meeting—Emory University School of Medicine

The annual postgraduate meeting of the Department of Ophthalmology, Emory University School of Medicine will be held on Nov. 30 and Dec. 1, at the Grady Memorial Hospital Auditorium, Atlanta.

Diagnostic methods of examination of the ocular fundus, clinical manifestations, differential diagnosis and pathologic anatomy of lesions of the vitreous, uvea, retina and optic nerve will be presented. The guest lecturers will be Dr. Algernon B. Reese, Clinical Professor of Ophthalmology, College of Physicians and Surgeons, Columbia University, New York; Dr. Charles L. Schepens, Clinical Associate in Ophthalmology, Harvard Medical School, Boston; and Dr. Lorenz Zimmerman, Chief, Ophthalmic Pathology Branch, and Registrar, Registry of Ophthalmic Pathology, Armed Forces Institute of Pathology, Washington.

For further information write the Director, Postgraduate Education, Department of Ophthalmology, Emory University School of Medicine, 80 Butler Street, S.E., Atlanta 3, Georgia.

Middle Tennessee Medical Association Program

The meeting of the Middle Tennessee Medical Association will be conducted on November 16th in Murfreesboro. Following is the program:

Meeting called to order by Dr. John T. Mason, President, Conference Room, Rutherford County Hospital.

Torsion of the Scrotal Contents, by Tom E. Nesbitt, M.D., Nashville; Discussion by Albert P. Isenhour, Jr., M.D., Nashville; Recent Advances in the Treatment of Breast Cancer, by Malcolm Lewis, M.D., Nashville; Discussion by B. Thomas Iglehart, M.D., Clarksville; Symposium on Burns, Moderator: Herschel Graves, Jr., M.D., Nashville; Panelists, Greer Ricketson, M.D., Thomas G. Pennington, M.D. and Joe M. Miller, M.D., all of Nashville; Discussion by Richard E. Green, M.D., Murfreesboro.

Presidential Address, by Dr. John T. Mason; Are We Fighting a Battle We Can Win? by Mr. Jack Ballentine, Exec. Director, TSMA; The Convulsive Disorder, by John P. Kinnard, M.D., Nashville; Clinical Electroencephalography, by James

W. Ward, M.D., Nashville; Pediatric Office Procedures by Thomas Zerfoss, Jr., M.D., Nashville; Recent Advances in Cardiovascular Surgery by David Dodd, M.D., Murfreesboro; Discussion by William H. Edwards, M.D., Nashville; Stabilization of Cervical Spine Following Acute Trauma by Lt. Col. Ernest Lineberger, MC, Ft. Campbell, Ky., Discussion by George Carpenter, M.D., Nashville; Proper Early Management of Extremity Wounds, by Richard E. Green, M.D., Murfreesboro; Discussion by Carl E. Adams, M.D., Murfreesboro.

Meeting of the Southern Medical Association

The 55th Annual Meeting of the Southern Medical Association will be held in Dallas, Texas, November 6-9. The headquarters hotel will be the Adolphus. Prominent physicians of the country will appear as guest speakers before the scientific sessions arranged by the 21 Sections. There also will be general scientific sessions and symposia on medico-economics and other timely subjects.

Entertainment features will include the president's luncheon and a banquet. A program also has been arranged for wives of physicians attending the meeting.

American Thyroid Association Van Meter Prize Award

The American Thyroid Association, Inc. again offers the Van Meter Prize Award of \$500 to the essayist submitting the best manuscript of original and unpublished work concerning "Goiter." The award will be made at the annual meeting of the Association at the Roosevelt Hotel, New Orleans, Louisiana, May 9-12, 1962. For complete information, write Theodore Winship, M.D., Secretary, 430 N. Michigan Avenue, Chicago 11, Illinois.

Physicians Recently Licensed in Tennessee

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Maynard L. Sisler, Hempstead, N.Y.
Richard D. Buchanan, Nashville
Robert E. Burr, Nashville
Theodore Lawwill, Lookout Mountain
Thomas E. Hayes, Waverly
Kenneth C. Lynch, Kingsport
Sidney C. Ray, Roanoke, Va.
Jerome S. Siegel, Chicago, Ill.
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P.G. Course on Diabetes

The Tennessee Diabetic Association is presenting its first postgraduate course in the management of diabetes mellitus on Saturday, October 28, 1961. This half-day course will be in Nashville at the Maxwell House Hotel the day after the meeting of Tennessee Academy of General Practice. A stimulating morning program and luncheon are planned. Guest speaker will be Dr. Solomon Papper, Professor of Medicine, Medical College of Virginia. Dr. Papper, a reknowned teacher of bedside medicine, has special interests in nephrology and fluid balance. General Practice credits are allowed.

Southern Chapter American College of Chest Physicians

The Southern Chapter of the American College of Chest Physicians will meet at the Sheraton Dallas Hotel, Dallas, on November 4 and 5. The program starts at 1:00 p.m.

Cardiac Day

Tennessee physicians are cordially invited to attend **CARDIAC DAY**, a symposium on heart disease at Vanderbilt University Hospital on November 16 and 17, presented by the Middle Tennessee Heart Association in cooperation with the Tennessee Department of Public Health and Vanderbilt University School of Medicine.

Six out-of-state guest speakers will participate in the program: Dr. Alexander S. Nadas, Children's Hospital, Boston, "Uses and Abuses of Digitalis"; Dr. Grace M. Roth, Chief of Vascular Laboratory, Lovelace Foundation, "Diagnostic Terminations for Hypertension"; Dr. Aldo Luisada, Director of Cardiology, Chicago Medical School, "Mechanism and Treatment of Extrasystoles"; Dr. Oglesby Paul, President of the American Heart Association, "Long-Term Problems of Coronary Artery Disease"; Dr. E. Stanley Crawford, Associate Professor of Surgery, Baylor University, "Surgical Considerations in Atherosclerosis"; and, Dr. John H. Moyer, Professor of Medicine, Hahnemann Medical College, "Treatment of Hypertension." Dr. Paul will be the guest speaker at a dinner on Thursday night which both doctors and their wives may attend.

Third National Conference on the Medical Aspects of Sports

Sponsored by the A.M.A. This will be held at the Cosmopolitan Hotel, Denver, Colo., at the time of the A.M.A. Clinical Meeting.

The Roane County Medical Society

The Society invites the general public to attend the Dr. Dwight E. Clark Memorial Lecture to be given Monday, Oct. 30, at 8:00 p.m. in the Jefferson Junior High School Auditorium, Oak Ridge. This lecture on "Stomach Ulcers" is of interest to everyone, and will be given by Dr. Lester R. Dragstedt, Emeritus Professor of Surgery, the University of Chicago. The Dr. Dwight E. Clark Memorial Lecture was established in 1960 to honor the memory of Dr. Clark who died in 1959.

Professor Dragstedt will also address the Roane County Medical Society at its regular scientific meeting on Tuesday, Oct. 31 at 8:00 p.m., at the Holiday Inn in Oak Ridge, dinner at 6:00 p.m.

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The recognition of a whole group of viruses which are pathogenic has permitted a better understanding of a group of clinical syndromes. Though for the moment there is no specific treatment, the very knowledge of causative agents permits further study and possibly therapeutic management.

Clinical and Epidemiological Aspects of Enterovirus Infections*

ALEXANDER D. LANGMUIR, M.D.,† Atlanta, Georgia

To many practicing physicians the discovery of the Coxsackie and ECHO viruses may seem to be events of mere academic interest and little practical importance. This is a narrow view. These discoveries have led to the widespread recognition of a series of clinical and epidemiologic entities that are rapidly becoming a part of day by day general practice.

Only 15 years ago the enteroviruses as a group were unknown. The three types of poliovirus had not yet been differentiated. The Coxsackie and ECHO viruses were still to be discovered. At present, July 1961, the total count includes 62 separate specific viruses within the group and new candidate strains are still being isolated. Relatively simple, practical and standardized laboratory techniques now exist for isolation and identification of these viruses and for determining antibody responses. Diagnostic services are available through many State health departments, medical centers and the Communicable Disease Center of the U. S. Public Health Service in Atlanta. Thus, it is possible readily to identify an outbreak anywhere in the country.

Long before the specific Coxsackie and ECHO viruses were discovered, discerning clinicians and epidemiologists in various

parts of the world had described herpangina, epidemic myalgia and pleurodynia and aseptic meningitis. It was only with the discovery of the enteroviruses, however, that the specificity of these syndromes became fully appreciated.

Herpangina is one of the common forms of simple pharyngitis that occurs predominantly among children and during summer months. Fever of slight to moderate degree and short duration is accompanied by mild constitutional symptoms. The pathognomonic signs are found in the throat. Small discrete vesicles with a red areola occur on the anterior faucial pillars, palate and tonsils. These soon ulcerate and leave ulcers with a grayish exudate at their base. The course is benign; there are no sequelae; antibiotics are not indicated.

This disease is associated with the Group A Coxsackie viruses, but it may be presumptively diagnosed on the basis of the clinical findings alone. It needs to be differentiated from acute beta hemolytic streptococcal pharyngitis, diphtheria and other serious types of sore throat where definitive specific treatment is essential. Epidemiologic evidence based on prevalence of the disease in the community especially during the summer helps in the diagnosis.

Epidemic pleurodynia and various forms of epidemic myalgia have been recorded for over a century especially in the Scandinavian literature. In classic form as "The Devil's Grip" or "Bornholm disease," the disease can be most dramatic, with sudden onset, fever, and severe pain usually local-

*Summary of paper read at the meeting of the Tennessee State Medical Association, April 11, 1961, Chattanooga, Tenn.

†Chief, Epidemiology Branch, CDC.

From the Communicable Disease Center, Public Health Service, U. S. Department of Health, Education, and Welfare, Atlanta 22, Georgia.

ized to the chest or abdomen. To the unwary physician the diagnosis of pleurisy, pneumonia, acute appendicitis or even some abdominal catastrophe may be entertained. The alert physician who thinks of this entity, or who is aware of the prevalence of similar cases in the community, can avoid much trouble. The course of the disease while sometimes apparently stormy is short and benign. Treatment is purely symptomatic with reassurance to worried parents. Recurrences or relapses or a dengue-like biphasic course are sufficiently frequent to warrant watchfulness. This disease is associated with certain of the five types of Coxsackie Group B viruses. All the viruses in this group also cause acute undifferentiated febrile illness with myalgia of varying severity.

Aseptic meningitis also was first clearly characterized in Scandinavia and has been given many different names. In this country until recently it has long been confused with, and in fact largely merged with, the syndrome of nonparalytic poliomyelitis. The two diseases cannot be distinguished purely on clinical grounds alone, but there is great need that the proper diagnosis be made. If

polioviruses are spreading in the community it is important to know. Intensive immunization with Salk vaccine or the new oral vaccines soon to become available is indicated. If cases of aseptic meningitis syndrome due to Coxsackie Type B or ECHO virus infections are prevalent, a poliovaccine campaign would not be warranted. Epidemiologic evidence is of special value in helping to make this differentiation. An outbreak of poliomyelitis should be accompanied by cases with the classical asymmetrical paralysis that is pathognomonic of this disease. Contrary to common belief a high prevalence of abortive febrile disease is not characteristic of poliomyelitis. In outbreaks of aseptic meningitis due to ECHO or Coxsackie viruses, milder undifferentiated illness is very common. Clusters of cases in families and high attack rates in communities frequently occur.

Thus the enteroviruses comprise a group of agents that cause a series of specific common disease syndromes that can be at least strongly suspected if not positively diagnosed by the general practitioner on his daily rounds.

With thought given to the prevention of etiologic factors, and especially with education of women to the need for periodic examinations, cancer of the cervix could be a rare disease.

The Prevention of Invasive Cancer of the Cervix*

W. POWELL HUTCHERSON, M.D., Chattanooga, Tenn.

Cancer of the cervix should be classified as a preventable disease. This thought has been recently proposed by Hertig¹⁸ and Younge.⁵ All malignant tumors are included under the common heading of cancer, meaning crab, because of the claw-like projections that characterize such growths. A malignancy if untreated will eventually kill the host; a malignancy infiltrates the surrounding tissue; when a malignancy is removed, it may recur; a malignancy metastasizes to distant organs. The topic is then the prevention of invasive cancer of the cervix. The relationship of carcinoma in situ to invasive cancer will be discussed later.

In recent years we have seen the revival of surgery as a primary treatment for invasive cancer of the cervix. Consequently we have gone through an era of debate concerning the merits of surgery versus irradiation. The overall results of treatment of invasive cervical cancer have improved in the past 20 years from a 30 to 35% to a more favorable 50% of satisfactory results due to blood banks, antibiotics and improved surgical and irradiation technics. It is not within the scope of this presentation to discuss the debatable question of surgery versus irradiation except to emphasize that the best overall results in invasive cervical cancer obtained with either or both or any combination thereof is a cure rate of approximately 50 per cent.

Therefore, until a more definitive treatment of cancer is developed, it is rational to pursue the idea that we as doctors might be overlooking one very important aspect of dealing with cervical cancer, namely prevention. From the study of the natural

history and the epidemiology of cervical cancer, it is reasonable to believe that invasive carcinoma of the cervix is a preventable disease. The American Cancer Society estimates that 10,000 women in the United States will die of cancer of the cervix in 1961. With the present weapons at hand and the proper education of the public and the medical profession, the death rate in the next decade could be reduced to a small number. But the present education of the public has been directed toward early diagnosis of cancer publicizing the symptoms of cancer. We know that when the lesion becomes symptomatic the cure rate drops. The tiger is already out of the cage.

Douglas and Finn,¹ in discussing Early Detection of Cancer of the Cervix state, "Who is at fault? All of us! Patient, doctor and gynecologist. The patient must be instructed to report immediately to her doctor when any untoward bleeding occurs or, better still, to see her doctor frequently for routine check-ups. The doctor must encourage the habit of preventive physical examination and must supplement his vision and touch by vaginal smear and cervical biopsy." However, only by the method of encouraging well patients to seek preventative physical examinations which include vaginal smears, can we hope to prevent or control cervical cancer.

As early as 1929, Pemberton and Smith³ published a paper on the prevention of carcinoma of the cervix, mainly pointing out the value of treatment of the infected and/or lacerated cervix. Cashman,⁴ in 1941, discussed the role of deep cauterization of the cervix in the prevention of cancer of the cervix. Searching further, one finds numerous articles in one or two aspects of this subject. However, not until 1957 when Younge⁵ published his paper on "Cancer of

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the Cervix, A Preventable Disease" did anyone bring together and suggest most of the prophylactic measures possible today. The purpose of this paper is to discuss these prophylactic measures and the role of the physician in their application in private practice. The latter part of this discussion includes an analysis of a group of patients followed from July 1, 1951 to August 1, 1959, summarizing an effort to prevent invasive cancer of the cervix in a private gynecologic practice.

The factors which appear to be most prominently associated with development of cancer of the cervix are as follows: (1) the relationship of cervical and penile hygiene to the development of cancer of the cervix; (2) the socio-economic factor; and (3) the relationship of carcinoma in-situ of the cervix to invasive cancer.

Cervical and Penile Hygiene

For years multiple child-birth has been thought to be a strong etiologic factor in the development of cancer of the cervix. However, Wynder⁶ has concluded from his data that pregnancy is of no etiologic significance in the development of cancer of the cervix, but merely reflects the fact that these patients marry earlier and consequently have a longer exposure to irritating factors. For years we have known that the incidence of cancer in Jewish women is extremely low as compared to non-Jewish women, alleged to result from universal circumcision of the male Jew. Wynder⁶ found that the incidence of cancer of the cervix in other ethnic groups is remarkably well correlated with the age of the first intercourse and the penile hygiene of the male.

H. R. Pratt-Thomas,⁷ using mice and by means of biweekly vaginal injections with raw human smegma, found that one-third of the mice developed overt invasive cancer of the cervix; one-sixth developed carcinoma in-situ, one with questionable invasion, and the other one-half developed marked epithelial hyperplasia of the cervicovaginal mucosa. Gagnon⁸ has reported on the rarity of carcinoma of the cervix in nuns. The recent studies of Jones, McDonald and Breslow¹⁹ indicate that circumcision might not be a factor in the prevention of this disease. However, review of the

literature generally indicates that early marriage and prolonged exposure to the uncircumcised male predisposes to the development of cervical cancer. There have been articles in recent years condemning routine circumcision as unnecessary surgery. On the contrary, it appears that universal circumcision should be popularized. Obviously, better hygiene is possible in the circumcised male. Unfortunately we have no statistics relative to this factor.

Huggins⁹ and Novak¹⁰ estimated that 85 to 95% of parous women have cervicitis and erosions of varying degrees. Younge and associates,¹⁵ found that the cervix was abnormal in 90% of 135 patients having carcinoma in-situ studied at the Free Hospital for Women. Thus, prevention begins with treating the congenital erosion in the female before the exposure to marriage and childbirth, and continues with good obstetric and gynecologic care.

Numerous investigators have found a sharply decreased incidence of cancer of the cervix if the cervix was kept in a clean condition.^{3, 4, 8} Furthermore, Greentree¹¹ found that of 225 consecutive cases of cervical cancer, in not a single instance had the cervix been cauterized prior to the onset of the cancer.

Finally, what is a normal cervix? A normal cervix is covered with squamous epithelium of a normal color distal to the beginning of a cervical canal of a normal diameter. The squamous epithelium should stain a dark brown color after gentle cleansing and the application of Schiller's iodine solution.¹⁷ When any other type of epithelium, or tissue, extends distal to or beyond the canal, that cervix is abnormal. Such a cervix must be investigated thoroughly and treated adequately.

Socio-Economic Factor

The incidence of cancer of the cervix is twice as high in the nonwhite population as in the white population as shown by a United States Public Health survey in 60 major cities from 1947 to 1948. Jones and collaborators,¹⁸ conclude that the most important factors seem to be the socio-economic complex of relative poverty, with rapid sexual maturation and a haste to begin early and to terminate early, the repro-

ductive phase of biologic destiny. They further reported that marriage, intercourse, first and last pregnancies, separation and divorce occur significantly earlier in the women destined to develop cancer of the cervix.

Wynder's "report shows the relationship of early sexual experience and poor penile hygiene to a high incidence of cervical cancer in the American Negro. There are still many home deliveries by midwives and physicians throughout the United States today due to socio-economic factors. These people must be educated to the necessity of good hygiene and routine preventive examinations.

The Relationship of Carcinoma In-Situ to Cancer of the Cervix

Carcinoma in-situ has been referred to by various terms such as "incipient carcinoma," "noninvasive carcinoma," "Bowens disease of the cervix" and "erythroplasia" to name a few. In recent years most clinicians and the pathologists have more or less accepted the term carcinoma in-situ to mean the stage of development through which the squamous epithelium progresses before invasion takes place. The microscopic picture is the same in carcinoma in-situ as invasive cancer except that the growth has not broken through the basement membrane. The incidence of the two is similar irrespective of the various ethnic groups. Carcinoma in-situ usually appears some years earlier than does cervical cancer. Age distribution curves of carcinoma in-situ and invasive cervical cancer parallel each other.^{15,16} The former precedes the latter by about ten years. At the Free Hospital for Women, a pictorial graph of 1,553 cases of Stage O (carcinoma in-situ) to the most advanced stages relative to average ages suggests a progression from one stage to the next. A pattern of carcinoma in-situ nearly always is seen at the periphery of early invasive cervical cancer. Petersen¹² followed the course of 127 cases of carcinoma in-situ from three to ten years, and at the end of nine years 33% had become manifest carcinoma. Masterson¹³ reports a similar experience. Jones, Galvin and Telinde¹⁴ restudied previous biopsies available on 24 cases of cancer of the cervix;

17 of these had a previously unrecognized carcinoma in-situ one to 20 years prior to development of invasive cancer. All of the foregoing facts unquestionably show that a large percentage of instances of carcinoma in-situ will eventually become invasive cancer. However, that all cases of carcinoma in-situ will eventually become invasive cancer cannot be proven with the facts available today.

Methods of Detecting Carcinoma In-Situ

Carcinoma in-situ of the cervix or intra-epithelial carcinoma is usually symptomless. Therefore it is possible to have a normal appearing cervix which contains carcinoma in-situ. It is well recognized that the starting point of this growth is usually at the squamocolumnar junction.

If the patients are educated to have semi-annual examinations, we have from several months to several years to detect this lesion which is theoretically 100% curable. These semi-annual examinations must include open eyes, Papanicolaou smears, the Schiller Test, cervical biopsies and fractional curettage when justified. With these methods most lesions can be detected in this early pre-invasive stage. The national death rate²¹ from cervical cancer had declined from 25.5/100,000 in 1940 to 14.4/100,000 in 1958, unquestionably due to the more frequent use of the Papanicolaou smears.²⁰

Clinical Study

The following table shows the results of a clinical study of a large number of women over an 8 year period.

A total of 1,349 diseased cervixes were treated by cautery, conization, repair and polypectomy. The remainder of diseased cervixes can be accounted for by diagnoses associated with uteri removed for other benign reasons, other cases referred back to their family doctors for treatment, and a few who just never returned.

The course in 976 patients were followed semi-annually for from one to nine years. All patients had at least one smear and at least two complete physical examinations. Five of these patients developed carcinoma in-situ. Of these 5, four had had previous negative smears and clean cervixes six months to one year prior to the develop-

ANALYSIS OF 3,569 PATIENTS WHO MADE 8,871 VISITS
FROM JULY 1, 1951 TO AUGUST 1, 1959

<i>Cervicitis or Erosion</i> 1,923	<i>Smears</i> 3,131	<i>Biopsy</i> 552	<i>D & C</i> 763	<i>Cautery</i> 1,043	<i>Conization</i> 152	<i>Miscellaneous</i> 154
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Note: Smears performed only since 1955.

ment of suspicious smears and an abnormal cervix. One case was diagnosed in 1954 by biopsy before cytologic diagnosis was available locally. Only one instance of invasive cervical cancer developed during this program of observation. On the initial visit this patient gave no history of abnormal bleeding, there was a small innocuous appearing erosion and treatment was started for trichomonas vaginitis. Papanicolaou smears revealed infection but no tumor cells. She was advised to return for cervical cauterization, but did not appear until four months later when she had had menometrorrhagia. Dilation, curettage, biopsy and cautery were advised at this time. Again, the patient refused this and not until eleven months later did she finally submit to operation. The cervix still looked benign. However by this time she had had contact bleeding on three occasions. A fractional curettage and multiple biopsies of the cervix revealed early invasive epidermoid carcinoma of the cervix. Treatment consisted of a radical hysterectomy with node dissection, and now after four and a half years there is no evidence of recurrence.

The 5 cases of carcinoma in-situ discovered in 976 women over this period of time are difficult to compare with other results. In fact we have not found a similar study in private practice.

The first Memphis screening tests revealed roughly 4 cases of carcinoma in-situ per 1,000 and about 3.5 cases of invasive cancer of the cervix per 1,000. If this one patient who developed early invasive cancer had subscribed one year earlier to the diagnostic measures advised, it is possible she might have avoided the development of invasive cancer.

One reason for this study is to learn whether the often somewhat uninteresting semi-annual examination is worth the time and effort on the part of the doctor and the expense put to the patient. There are so many variables in such a study. However,

not one patient in this group developed invasive cancer during this study nor to date if the treatment outlined was followed. I think this is "proof of the pudding."

In 3 patients developing carcinoma in-situ of the cervix, I had personally done what I thought was adequate cauterization six months to one year prior to the development of carcinoma in-situ. These cervixes had been observed until they returned to a normal appearance. Therefore, in this group cauterization of the cervix did not prevent development of carcinoma in-situ in 3 cases. Probably adequate gynecologic care of the cervix will minimize carcinoma in-situ of the cervix. It does appear that the incidence of invasive cancer can be minimized by such a program of aggressive treatment of benign cervical disease and is therefore worthwhile.

Since the availability of vaginal smears locally in March 1955, 21 more cases of carcinoma in-situ have been diagnosed on or soon after the first visit and are now cured.

Prevention of invasive cervical cancer obviously must include adequate treatment of carcinoma in-situ, in spite of the fact that proof is insufficient to assume every in-situ lesion will become manifest cancer. After cold-knife conization has ruled out invasion, the treatment may vary from deep conization or amputation to total hysterectomy, depending upon the desirability of maintaining the child-bearing function. However, total abdominal or vaginal hysterectomy is the treatment of choice. The patient and husband must have full understanding of the hazards associated with any conservative procedures less than total hysterectomy. This is shown in the slide where one of five cases is being followed after cold-knife conization. The initial biopsy had removed the lesion. Periodic examinations every four months for the past three years have shown the cervix to be normal in appearance, and smears and Schiller Tests are negative.

Summary

The above statistical facts strongly imply that certain measures would immeasurably reduce the incidence and death rate of invasive cervical cancer. These measures are as follows:

(1) That the youth of today, both male and female, be taught the proper hygienic measures including the necessity of premarital examination and counseling so that all genital abnormalities can be corrected before marriage.

(2) That universal circumcision of the male baby be popularized rather than condemned.

(3) That the public and medical profession be educated to semi-annual examinations for the parous woman, or at least annual examinations. The earlier the marriage and the more children, the more frequent the examination should be performed.

(4) That these examinations be guided by open eyes and sensitive fingers, supplemented by the use of cervical smears, the Schiller Test and frequent use of the curette and biopsy forceps.

(5) That every abnormal cervix be properly investigated and treated adequately until it returned to normal since cancer is rarely found in the normal cervix.

(6) That our attention should be directed toward early detection of carcinoma in-situ (pre-invasion cancer) and not invasion cancer, since carcinoma in-situ precedes invasive cancer usually by a long interval and remains there just waiting for the physician to diagnose when the disease is theoretically 100% curable.

Responsibility

The lay public must learn the wisdom of preventive medicine. We as physicians must develop the philosophy of "prevention of carcinoma of the cervix." It is a "State of mind" so to speak. Every physician who treats female patients must either assume the responsibility or refer the patient for such prophylactic measures. Only then, radical surgery and radical irradiation will rarely be a necessary part of the treatment of cervical cancer.

Conclusion

Today, the best treatment of invasive cancer of the cervix is prevention rather than either irradiation or radical surgery!

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The family doctor is destined to assume a new role in the area of psychiatric practice. World War II gave an impetus to the understanding of psychiatric needs; the scarcity of trained psychiatrists could only emphasize these needs. Leaders in the American Psychiatric Association and the American Academy of General Practice agreed that the family doctor needed to learn more about psychodynamics so he might manage the lesser psychiatric problems of his patients. He too must be the one to assist in keeping patients out of mental hospitals and to keep them adjusted at home when they are discharged.

Going Home For Keeps*

WILLIAM F. SHEELEY, M.D.,† Washington, D.C.

More and more state mental hospital patients are returning to their homes. Need I say this trend gives us psychiatrists no little satisfaction? Less satisfying, however, is a growing rise in re-admission rates. If we lose all our gains of discharge to re-admissions, we shall make little real progress. In seeking ways to lower re-admissions while keeping discharges high, therefore, we are looking to the community for essential help; we are looking to the family physician.

The Problem of Re-admission

The re-admission problem is everybody's problem. It is a problem not only of the patient and state hospital, but also of the patient's family, the family physician, and many others in the community itself. What are some of the ways this problem affects the community?

When a discharged patient must return to the state hospital, we lose much of the time, concern, and money invested in him following discharge. Social agencies lose the staff time and the financial assistance given for his resettlement. Employers lose time and money expended to orient him to his new job. Family physicians lose time given both to him and to his family. Furthermore, when he is discharged from the state hospital once again, these community people must all start over, but this time haunted by having failed at least once.

Secondly, re-admission both disappoints and unsettles the patient's family. When-

ever someone either enters a family or leaves it, the family must make a major adjustment, whether an incoming member is baby, in-law, or patient returned from a state hospital, or a departing member has left for college, died, or gone to a mental hospital. Place must be found for an incoming member by re-aligning existing interpersonal relationships; the gap left by a departing member must be filled in or plugged up. The equilibrium of the family is twice disturbed—and in vain—when a patient returns to it from the hospital, remains home briefly, and then must leave it to be re-admitted.

Thirdly, re-admission discourages the patient. He may despair of ever leaving the hospital again. His mental illness, already worsened, may be further aggravated by the very fact of readmission. He may lose confidence in the hospital staff and in the community.

Finally, re-admission adversely affects the state hospital. For one thing, adding a high re-admission rate to today's high first-admission rate keeps the patient census high. High census means high total operating costs, overcrowding, and overloading of treatment facilities. Overloaded treatment facilities means inadequate treatment and prolonged average patient stay. Prolonged patient stay, of course, means climbing census and still more incomplete treatment, and so on and on. Precious staff time is used up, furthermore, simply in the mechanics of discharging, re-admitting, and discharging the patient again, and there is so little staff time when one psychiatrist must treat 200 patients.

Related to the problem of overcrowding is the matter of atmosphere—of milieu, if you will. How important is just the way

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†Chief, General Practitioner Education Project, American Psychiatric Association, 1700 18th Street, N.W., Washington 9, D.C.

one feels walking into a hospital. The whole therapeutic effort is affected by the mood a ward generates in both staff and patient. If ward atmosphere promotes patient self-esteem, sense of individual importance, optimism, clarity of thought, and sufficient feeling of leisure to sort out confusing emotions, it greatly augments therapeutic effect; if, on the contrary, ward's atmosphere promotes self-debasement, a sense of being lost in the mob, pessimism, confusion, and feeling of hurry and clatter, therapeutic effort must fight not only the illness but the treating institution itself. Any of you who have gone into an overcrowded ward know the effect of its atmosphere.

Now, what are some of the causes of a high re-admission rate? What kinds of things should we eliminate, change, or provide in order to reduce this rate? Does the community—for that matter, the family physician—share any responsibility with the state mental hospital?

True, some re-admissions occur just because many of the mental illnesses are essentially chronic and recurrent in nature. A patient may enjoy a remission lasting months or years and then quite unexpectedly—or inevitably—suffer a dramatic exacerbation urgently requiring hospitalization. As yet, psychiatry cannot prevent all such exacerbations. Fortunately, these exacerbations are today a relatively infrequent cause of re-admission. As we shall see later, in fact, many exacerbations can be treated more effectively in the community than in the state hospital anyhow.

Another cause of re-admission is discharging the patient before he is ready psychiatrically, or before the community has been adequately prepared for him. Naturally, the staff considers carefully whether to discharge a patient to keep such error to a minimum, but now and again when dealing with a condition as complex as mental illness we are going to discharge patients prematurely. When community and hospital work closely together, however, the incidence of such errors falls remarkably, especially when the staff gets help in evaluating the amount of emotional and other support available to the patient in the community. The family physician can help the staff make a realistic, accurate estimate of

this support by keeping staff informed of pertinent facts concerning family and attitude of the community toward the patient.

Another cause of the patient's return to hospital is inadequate community preparation for the discharge. Many neighbors and friends the patient meets on the street lack elementary understanding of the nature of the mentally ill person. They have not yet learned that a former state hospital patient is not a dangerous person (he is less apt to commit a crime of violence, for example, than a person who has never been hospitalized); they have perhaps not even learned that although he may have some unusual mannerisms of thought and behavior, most of his behavior is quite like their own. Uninformed people more or less openly shun the discharged patient. And since most people with psychiatric problems are unusually sensitive to the attitudes of others, this public rejection crushes him.

The discharged patient may receive too little social and economic support to weather the first difficult weeks after discharge. The community's social agencies, perhaps for want of enough budget or staff, do not sufficiently aid his social adjustment. Potential employers, because of misconceptions of the capabilities of former mental hospital patients, prevent him getting a job, and otherwise making an economic recovery which will help keep him out of the hospital.

Members of his own family, perhaps because they have not been taught to understand him, may begrudge him a place among them once more, or they may relate to him in inept and gauche ways and thereby make him feel rejected and unwanted. He may enter a broken home full of emotional upheavals that irritate his raw emotions. Or perhaps he has no family at all to offer him the warmth and personal interest we all must have.

The quantity and quality of psychiatric and other medical care in the community may not fill the discharged patients' needs. As yet, very few communities have established psychiatry outpatient clinics in general hospitals or community mental health clinics. Family physicians may give too little post-hospitalization care because of absorbing involvement in the treatment of physical illness, or the belief that treating

mental illness takes inordinate amounts of time. Even when family physicians are interested, faulty communications between them and the state hospital vitiate their usefulness. The state hospital certainly shares responsibility for good communications, because it must tell the family doctor what it knows about his patient, what treatment it found most effective, and what management it recommends further, if he is to capitalize on what the hospital has done. Possibly, however, the family physician considers himself inadequately trained psychiatrically to undertake follow-up care. After all, only recently have medical schools begun offering significant amounts of psychiatric instruction to the undergraduate medical student. Physicians who went to medical school during my generation, for example, received very little psychiatry indeed, and might therefore be expected to feel reluctant to become involved in the patient's treatment.

Solutions to Re-admissions

With these few examples of the causes of re-admission, let us turn to ways to solve this re-admission problem. Once again we shall concentrate on measures of particular concern to the hospital, community, and family physician.

An important first step in coming to grips with this problem is closing ties between the state mental hospital and the other medical and social resources and functions of the community. The day is long past when the state hospital can be permitted to stand apart from the community, and today's meeting is a step toward greater community-hospital rapprochement. As the social agencies and other community resources enter more and more into the care of the mentally ill person and his family, and as patient turn-over rates continue to rise in state hospitals, close collaboration between state hospital and other community activities becomes all the more necessary.

In this connection the hospital can and should make its capabilities and limitations known to the community. It can establish and maintain close liaison with community social agencies and its patients' families. If such agencies do not exist, or if their capabilities are limited, the hospital should stim-

ulate family physicians and other community leaders to see that adequate agencies are established and well supported. It can establish close relationships with family physicians by means of seminars such as this very one today and other kinds of post-graduate psychiatric courses. It can keep the family physician regularly and fully informed of his patients in the hospital. It can advise him about specific phases of follow-up care. It should even help him with other psychiatric questions that arise in his daily practice whether or not they concern discharged patients.

On its side, the community can help solve the re-admission problem simply by not committing patients unnecessarily in the first place. Of late, for example, many communities have had a distressing tendency to use the state hospital to house its helpless aged persons. Not psychiatrically ill in the usual sense, a large percentage of these oldsters could much more adequately be cared for in a rest home or other local facility. By sending to the state hospital only those who can really profit from the psychiatric therapies available there, the community cares for its mentally ill citizens more properly, avoids adding pointlessly to the already excessive load on hospital staff, and more adequately provides for its old folks. Not having to admit and discharge these potential patients, the staff has more time to give individual attention to patients, and is therefore less apt to discharge them too soon psychiatrically, and more apt to assure adequate community preparation.

Another thing the community—especially the family—can do is to stay close to the patient from the beginning to the end of hospitalization. Such continuing contact, of course, keeps family and other significant community elements, such as social agencies, posted on the progress of the patient and keeps him posted on them. Then when the time of discharge comes very little preparation of patient, family, and community is necessary. In this connection, the family physician can play a very important part. He can allay family's and the patient's doubts concerning one another. Furthermore, by explaining to the family the "what's" and "why's" of the hospital's treatment program, and by keeping the social

agencies informed of needs arising among both patient and family, he can keep both the family and social agency oriented and maintain their capacity to support the patient following discharge. The family physician will find the hospital social service department is a very useful ally both working with the hospital and working with family and community social agencies. This department often has very useful social information about the patient.

Once the patient has actually been discharged, the community's part becomes even more significant. Having already described some of the social acceptance, job opportunities, family affection, and other social and economic assistance the community can give, let us concentrate on some contributions of the family physician:

One important thing the family physician can do is simply to offer a sympathetic ear to both family and patient. As suggested above, the patient's return home is no easy matter for patient nor family. Silly and needless misunderstandings, nonetheless painful for both patient and family, plague and beset them for weeks and months. When upset and discouraged they need someone to whom they can reveal their fears and doubts, and confess their feelings of guilt. By simply letting them talk out their problems and himself offering a modicum of advice and comment, the family physician can help them find solutions for soluble problems and acceptance of insoluble ones.

As he listens, however, the family physician will occasionally learn of other problems requiring him or one of the social agencies to intervene. If social assistance is needed, the doctor is in a good position not only to induce the patient and family to seek it but also to help them get it. Now and then the family physician can help the patient get a job. For example, if it seems to him that a potential employer is reluctant to hire the patient because of mistaken notions as to how he would act on the job, the physician can, with the patient's permission of course, set the record straight. The physician can contribute to the better understanding by industry of the mental patient.

The family physician, obviously, can also

assume much of the medical responsibility for the patient's treatment. This treatment may just amount to continuing the patient indefinitely on the dosage of ataractic drug found most suitable in the hospital. It may involve referral either back to the hospital or to a local private psychiatrist. From time to time the occasional patient may suffer an acute exacerbation sufficient to require hospitalization, but not sufficient to require return to the state hospital. If the local general hospital has a psychiatric service, the family physician can assure the patient being admitted there to weather a brief psychotic episode. If, on the other hand, the local hospital has no psychiatric service, the family physician can make a great contribution to the treatment of mental illness by "spark-plugging" efforts to create such a service. Such in-patient and out-patient care in the community during brief episodes of illness can do much to keep down state hospital re-admission rates and to minimize displacement problems of patient and family.

Despite these ministrations in the family physician's office, the psychiatrist's office, and the local general hospital, a patient will now and then have to return to the state hospital. Even then, the family doctor can be very important by helping keep the length of stay to a minimum. If he and the state hospital enjoy the close collaborative relationship we have described earlier, it will be quite natural for him to send with the patient, or even preceeding him, full details of what he has observed about the patient and his family, and what he had been doing for them. Such an entree assures the patient the best possible reception at the hospital, because the staff, fully informed in advance as to what has happened to him in the community, can start specific therapy almost at once. The chances of such therapy being successful and of the patient soon returning to his community are increased considerably.

During the course of these remarks we have been asking a great deal of the family physician. We have done so, of course, because he is in a unique position; simply by virtue of being the family physician, he has certain very important things to offer the patient that none other can offer him. But

suppose we put the shoe on the other foot for the moment: What does the family physician get for himself from all this?

To begin with, and not inconsiderable, is the satisfaction a physician feels at being truly a family physician, a good and capable friend who stands by the family during a period of crisis. He also gets the satisfaction of helping the community solve many vexing mental health problems.

Furthermore, dealing with these patients greatly expands the physician's skill in his day-to-day practice with patients whose primary problem is physical disease and not psychiatric. Almost every person suffering

from significant somatic illness has a concomitant emotional response to that illness; the physician who can recognize, understand, and skillfully treat those concomitants will enjoy more complete success treating the somatic aspects of the patient's problem. The physician who enrolls in special postgraduate psychiatry courses, who uses his experience with psychiatric patients to give greater depth to what he has learned in those courses, and who adapts to his medical practice what he has learned from both of these sources is the *complete* physician indeed.

In the *Annals of Internal Medicine*, July, 1961 the first three articles consist of stimulating, provocative discussions relating to hypertension. The first by Sir Robert Platt of Manchester, England is entitled "Essential Hypertension, Incidence, Course and Heredity." In it Sir Robert emphasizes the thesis that "essential hypertension is a hereditary disease in the same sense that Huntington's chorea is a hereditary disease, even though it be more influenced by environment, and the nature of its inheritance be more complex." Of 75 patients with essential hypertension he found the stigmata of blood pressure elevation in the family of three quarters of these. Moreover he found that the blood pressure of the siblings of patients with essential hypertension rose steeply with advancing age in contrast to the blood pressure of normals in the same age period.

The second paper by Doctor Jacques Genest and his associates entitled "The Adrenal Cortex and Renal Pressor Mechanism," discusses the demonstration of increased excretion of aldosterone in patients with hypertension. Not only was this consistently present but in addition these investigators were able to induce increased al-

dosterone excretion by intravenous injection of angiotension. Moreover they were able to demonstrate increased amounts of angiotension in the blood of hypertensives. They conclude that "these findings establish for the first time a direct relationship between the kidney and its renal pressor mechanism, the adrenal cortex, and sodium excretion in human hypertension."

And finally the third paper entitled "The effect of antithyroid drug on the clinical course of malignant hypertension" by Doctor George Perera describes the palliation of the symptoms and some of the signs of malignant hypertension by the administration of methimazole.

Of further interest is the editorial comment by Doctor Perera in the same issue of the *Annals of Internal Medicine*. He challenges the validity of all three papers, pointing out that while they are provocative, their chief value is in raising questions and stimulating retesting of the data presented. Further research is necessary to elucidate the problems provoked by each paper. (Abstracted for the Middle Tennessee Heart Association by F. Tremaine Billings, M.D., Nashville.)

Though cytologic studies have been widely applied to the female genital tract, the use of this method of examination needs further extension.

Colonic Exfoliative Cytology in the Diagnosis of Cancer of the Bowel*

MARVIN L. WOLFF, M.D., Memphis, Tenn.

This paper reports preliminary findings in colon washing studies performed at the University of Tennessee College of Medicine during the past two years.

Others have stressed the value of colonic exfoliative cytological examination.¹⁻⁵ The procedure is simple, the results are accurate, and the information obtained is helpful. The fact that malignant cells can be recovered from any part of the colon and identified is in itself remarkable. No false positive results have been obtained in this series; on the other hand, false negative results have been sometimes encountered. This suggests that demonstration of malignant cells is conclusive evidence for carcinoma.

Although almost all lesions of the colon, both malignant and benign, can be accurately diagnosed by clinical data, roentgenological studies, and sigmoidoscopic examinations. But a few cannot. For example, it is difficult to differentiate between benign and malignant polyps of the colon when they cannot be reached by the sigmoidoscope for biopsy. Or occasionally, a patient who has had an operation for carcinoma of the colon may return to his physician with evidence of obstruction of the bowel, and to distinguish between a recurrence of the carcinoma and a postoperative inflammatory stenosis may be impossible. In such situations the information gained by cytologic study of colon washings may be definitive. If it serves only to reinforce one's clinical impressions, it enables management of the patient with stronger conviction than otherwise possible.

The procedure itself requires only a few

minutes. It is the preparation that is difficult, because the patient's colon must be thoroughly cleansed. After many failures the following scheme has been most successful with us. For two days prior to the study, the patient is given only liquids, and on these two days he also receives two ounces of Fleet's Phospho-Soda. The evening before the study, he is given several cleansing saline enemas. Early on the morning of the study, he is given more saline enemas until the returns are clear; This sometimes requires as many as six enemas. After satisfactory preparation sigmoidoscopy is done and an Ewald tube is inserted through the instrument. The sigmoidoscope is then removed, leaving the Ewald tube in place. Through the Ewald tube 1000 cc. of normal saline is slowly introduced; the tube is then clamped off. The table is then leveled, the patient rotated to his right side and then to his back, and his abdomen is massaged. Next, the clamp is released and the returns are collected in a beaker submerged in a bucket of ice. The same procedure is repeated with 800 cc. of sodium acetate buffer (pH 5.5). Both specimens are sent immediately to the pathologist. (The technic of his cytologic studies is not given here.)

To date, 25 successful studies have been made, with the following results:

Total Cases—25			
Clinically benign	19	Clinically malignant	6
Negative cytology	19	Positive cytology	5
False positive cytology	0	False negative cytology	1

Though it should be remembered that the length of follow-up in some of these cases has been brief, a few case summaries will serve to show the usefulness of the procedure.

In one patient the colon washing study corroborated other findings. J. K., a 65 year

*From the Division of Medicine, University of Tennessee College of Medicine, and the John Gaston Hospital, City of Memphis Hospitals, Memphis, Tenn.

old colored man, had multiple polyps of the rectum and sigmoid colon, with a positive biopsy. The colon washing was also positive, and an appropriate operation was performed.

Another patient, L. B., a 53 year old negro, had anemia, weight loss, and blood in the stools. Roentgenograms by barium enema indicated a constricting lesion, but it was in the sigmoid colon beyond the reach of a sigmoidoscope. The colon washing was positive for malignant cells. Operation was performed, and a mucinous adenocarcinoma of the sigmoid colon was removed.

In contrast to the above case, a patient with a benign polyp was studied. S. M., a 50 year old colored man presented with grossly bloody stools. An upper gastrointestinal series was normal, but roentgenographic studies by barium enema demonstrated a large polyp on a stalk in the upper sigmoid colon. The colon washing study was negative. Polypectomy was performed, and the lesion proved benign.

One of the most interesting problems was that presented by J. P., a 55 year old negro who had symptoms of partial obstruction of the left colon. In 1959, she had received radiation therapy for carcinoma of the endometrium. In March, 1961, sigmoidoscopy and barium enema study revealed a constriction in the rectosigmoid region. The colon washing study was negative. In addition to the lower bowel symptoms, she was found to have a pelvic mass and evidence of obstruction of the left ureter. Surgical exploration revealed recurrent carcinoma of the uterus with pelvic metastases, and sclerosis and constriction of the left ureter due to previous radiation therapy. No evidence of a tumor of the bowel was

found, but there was indication of a post-radiation reaction. In this patient the negative washing study supported the idea of a postradiation reaction of the bowel instead of a malignant lesion.

Summary

Colonic exfoliative cytology is a definite aid in diagnosing lesions of the bowel. Results of 25 such studies are reported. Though preparation of the patient is difficult, the procedure itself is simple, and the demonstration of malignant cells in the washings seems to be conclusive evidence for the presence of carcinoma. In some cases, the colon washing study is particularly helpful in distinguishing between a malignant and a benign lesion of the bowel.

Note: I wish to thank Sidney Coleman, M.D., Associate Professor, Division of Pathology and Microbiology, University of Tennessee College of Medicine, for the cytologic studies made in this series.

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STAFF CONFERENCE

City of Memphis Hospitals* Urinary Obstruction Due to Tumor

DR. PHIL. C. SCHREIER: The history will be presented by Dr. Joseph N. Tygett, Chief Resident.

DR. JOSEPH N. TYGETT: *Present Illness:* This patient was a 55 year old nulliparous colored woman who was admitted to the Medical Service of the City of Memphis Hospitals on March 19, 1955. At that time, a very poor history was obtained. This was essentially that of a chronic debilitating illness of 5 years' duration, during which time the patient had had bilateral chronic leg ulcers. For 3 years, she had had a known lower abdominal mass and intermittent edema of the legs. She had also experienced weight loss, abdominal pain, and dyspnea. She gave no history of vaginal bleeding. Past history revealed no serious illnesses or operations.

Physical Examination: On general physical examination, her B.P. was 160/85, P. 128, R. 28, and T. 98.4°. This patient was a well developed, emaciated, colored woman who was stuporous and in respiratory distress. Her mouth was filled with frothy white sputum, there was slight meningismus, respirations were of the Kussmal type and were deep, rapid, and labored. There was some coughing; the chest, however, was clear to auscultation and percussion. Abdominal examination revealed a firm lower abdominal mass extending to three centimeters above the umbilicus. There was venous distension of the chest and of the abdominal wall. Vaginal examination revealed a small amount of bloody, foul leukorrhea in the vaginal vault. The cervix was displaced anteriorly and to the left. The pelvis was filled with a firm, fixed nodular mass extending to three centimeters above the umbilicus. This mass filled the cul-de-sac and in this area was felt to be somewhat cystic. Rectal examination revealed brown feces and confirmed the above findings. Examination of the lower extremities revealed venous distension and bilateral chronic leg ulcers. The skin of the legs was indurated, thickened, and hyperpigmented.

Laboratory Studies: Laboratory data revealed an hematocrit of 22 volumes per cent and a WBC. count of 13,850 with a normal differential. The erythrocyte sedimentation rate was 45 mm. per hour. Urinalysis disclosed a 2+ proteinuria and 10 to 25 white blood cells per high powered field. A lumbar puncture was done at the time of admission with an opening pressure of 245 mm. of water. There were 328 cells per cu. mm., 19 of

which were white cells. The cerebrospinal fluid protein was 57 mg. per 100 ml. Serologic tests for syphilis were negative. Admission electrolytes were CO₂ 7 mEq/L, Cl 109 mEq/L, and N.P.N. 108 mg. per 100 ml. A chest x-ray film made at the time of admission revealed no abnormalities, and an abdominal film revealed a large, soft tissue mass filling the pelvis and extending into the upper abdomen. The clinical impression on admission was "ovarian carcinoma with inferior vena caval obstruction and bilateral ureteral obstruction with uremia, and acidosis."

Course in Hospital: Shortly after admission this patient was transfused and received one sixth molar sodium lactate solution with marked improvement in her general condition and in her electrolyte picture. She was noted also to be oliguric. At this point, urological and gynecological consultations were requested.

DR. BETTY SCHETTLER: Reviewing this case from the gynecologic standpoint, we see a patient who is in very serious general condition. Now, whether this condition is due directly to the pelvic tumor which may be metastasizing and encroaching upon the ureters or due to some primary condition other than the pelvic tumor warrants careful consideration. I believe that something more should be done before we consider the possibility of exploring this woman for a pelvic tumor.

DR. JOHN Q. ADAMS: Her debilitated condition certainly made a tentative diagnosis of ovarian carcinoma with metastasis a very real possibility. It seems to me that in our present day we are faced with more and more patients in serious general condition who are poor surgical risks and who need extensive medical workup and observation prior to surgery, if indeed surgery can be done at all. At the present time many patients are receiving the benefit of surgery who would not have been operated on in the past. So, I do not think we can say at this point that this patient was not a candidate for surgery. She might be a surgical candidate after additional workup, and I think that the urologists' opinion of her oliguria as well as the internists' opinion concerning her cardiac status should be reviewed before any decision is made regarding abdominal exploration.

DR. ALBERT ALEXANDER: This patient presents a problem, or clinical picture, of uremia, and it has been suggested as one of the provisional diagnoses that she has ovarian carcinoma. It is said by some that the most comfortable form of death from termi-

*From the Department of Obstetrics and Gynecology, University of Tennessee College of Medicine and City of Memphis Hospitals, Memphis, Tenn.

nal malignancy is uremia. Would we be willing to regard this patient as terminal and as falling in that category?

DR. MARTHA LOVING: We are not sure of our diagnosis, Dr. Alexander. All we know is that she has a pelvic tumor and uremia. Were the diagnosis of ovarian carcinoma with obstructive uropathy established, I am sure some of us would be against laparotomy.

DR. MORTON GUBIN: What in our opinion concerning the three years history of a pelvic mass? Doesn't this seem to rule out ovarian carcinoma?

DR. HENRY TURNER: I agree with you, Dr. Gubin. The history of this woman having had this mass for a long period of time and the fact that there was no ascites are against the diagnosis of ovarian carcinoma. I think the main objective now should be to establish a definitive diagnosis if possible and to treat this patient symptomatically until that time. If there is bilateral hydronephrosis with blockage of the ureters, this should be relieved before anything further is done.

DR. LESTER R. GRAVES: There are several points in this history which favor a benign lesion; however, other factors suggest the presence of a malignancy. I would like to ask a question. What are the contraindications, if any, to performing a Silverman needle biopsy of the mass through one of the vaginal fornices? This would help establish a definite diagnosis.

DR. ADAMS: If we had a considerable amount of evidence that this was a malignancy, then a biopsy through the cul-de-sac might be in order. However, this mass was smooth, there was no ascites, there was no evidence of metastatic lesions in the chest, and it is likely or probable that it is a benign lesion. Perhaps the next step should be urological consultation to determine the nature of the urinary tract obstruction and what can be done about that before we proceed with a gynecologic procedure.

DR. SAM PATTERSON: Urologic consultation was obtained, Dr. Adams. It was thought by the urologists that the uremia and oliguria were due to obstruction of the ureters by the pelvic tumor. Retrograde urography was not possible because of marked distortion of the bladder by the pelvic tumor, and intravenous pyelography

was contraindicated because of the severity of the uremia. Renal exploration was advised, and it was the urologists' opinion that nephrostomies would probably be necessary.

DR. SCHREIER: Again, we must emphasize the seriousness of the problem that has presented itself here. This patient has uremia with a large pelvic tumor, the nature of which is not certain. Shall we renege and offer nothing or shall we pursue in an effort to bring her into condition for a relatively safe exploratory laparotomy? We now become more bold, and it is more difficult to discourage one's attempting to do something for a patient than say it was 20 years ago. Dr. Tygett, will you outline the procedures performed to prepare this patient for possible exploration?

DR. TYGETT: Although her general condition improved, as previously stated, Dr. Schreier, the NPN rose to 127 mgm. per cent. She was transferred to the urology service, and on March 28th a left renal exploration was performed. A markedly enlarged, scarred hydronephrotic kidney was found, the renal pelvis of which contained purulent urine. A left nephrostomy was performed. The patient's condition improved post-operatively, and the urinary output increased, although she was febrile for four days. On the 2nd of April, the NPN had decreased to 95 mgm. per cent. It was felt that a second nephrostomy was advisable, and right nephrostomy was performed on the 8th of April. Similar pathologic findings were found in the right kidney. Two days postoperatively, the NPN was 62 mgm. per cent.

DR. BEN EVERETT: I would like to read from the patient's hospital record an excellent note written by Dr. Sidney Birdsong, who was the intern on the service at that time. It more or less summarizes the patient's status at this moment. "At the present, the patient is much improved. Her NPN is 62 mgm. per cent. She has no specific complaints. There is a large mass filling the pelvis and lower abdomen, and undoubtedly is the cause of her obstructive uropathy. She had developed bilateral hydronephrosis due to obstruction and for which she had had bilateral nephrostomies. Nephrostomies are working well, and the output is good with the NPN falling. The

problem now is the pelvic mass, exactly what it is, and whether or not surgical exploration is indicated."

DR. GRAVES: At this time we were again requested to review the problem and decide as to whether we were willing to proceed with the pelvic laparotomy. It was agreed by the gynecologic staff that this patient was entitled to surgical exploration.

DR. PRENTISS TURMAN: We were all very surprised that this patient responded as well as she did. I recall seeing her, and in spite of her poor condition she improved steadily following the nephrostomies, and it was felt a week postoperatively that gynecologic operation was then feasible. This emphasizes that many patients can be gotten into condition for surgery by indicated procedures.

DR. LOUIE HENRY: In preparation for an operation for such a serious problem one must consider that all should be done to add to the protection of the patient. For instance, I am thinking of bowel preparation and the type of anesthesia to be used. In summary, a great deal of thinking must go into the planning of such a procedure to assure the patient every opportunity possible, should the indicated surgery be feasible. It is interesting to note that in this patient the bowel was not prepared. I call attention to this because today we would not consider exploring such a patient without giving some kind of antibiotic to disinfect the bowel. The contrast is very obvious of, say, seven or eight years.

DR. TYGETT: On the 12th of April, this patient was transferred to the gynecological service. At this time she was afebrile and her urinary output was good. The N.P.N. was 72 mg. per cent, and her general condition was much improved. On the 25th of April an exploratory laparotomy was performed under spinal anesthesia. Revealed at the time of surgery was a large solid ovarian tumor arising from the right ovary. The tumor measured approximately 14 by 17 by 23 cm. The surface was shiny and glistening. There were numerous adhesions between the tumor, the retrosigmoid colon and the parietal peritoneum. The uterus was of normal size and was displaced against the left pelvic sidewall. The left adnexal structures were essentially normal. This tumor mass was dissected free without

difficulty by blunt and sharp dissection and was removed along with the right Fallopian tube. A left salpingoophorectomy and subtotal hysterectomy were performed. A total hysterectomy was not done because of the patient's precarious condition during surgery. There was no evidence of malignancy at the time of surgery, the liver was grossly normal, and there were no peritoneal implants. No other pathologic changes were noted at the time of laparotomy. The microscopic diagnosis was "benign thecoma of the right ovary." This patient did well postoperatively. The nephrostomy tubes were removed, and she was discharged on the 18th postoperative day in good condition. At that time the NPN was 45 mg. per cent.

DR. PATTERSON: This patient has been followed in the Gynecology and Urology outpatient clinics. Although she is subjectively improved over her preoperative period, she has continued to have an elevated blood urea nitrogen, the last being 90 mgms. per cent in June 1961. She has continued to have chronic leg ulcers and mild edema of the lower extremities. Hypertension has also persisted. Retrograde pyelography in June of this year revealed obstruction at the left ureteropelvic junction, and operative correction of this is anticipated. Although this patient could easily have been discarded and not have had the benefit of definitive surgery, she is now living and in somewhat satisfactory condition six years postoperative. Although she has residual hypertension and occasional difficulty with edema and ulcers of the legs, she is otherwise doing very well.

DR. ADAMS: I think that a word might be said regarding the infrequency with which benign tumors cause bilateral ureteral obstruction. We have occasionally seen unilateral obstruction from fibroids, but very rarely do we see patients with bilateral urinary obstruction due to benign pelvic tumors. This again emphasizes the fact that many apparently hopeless patients must not be discarded and that it is possible in some instances to perform definitive surgery. Even though this patient's urinary tract was permanently damaged by the prolonged period of bilateral obstruction, she is living and comfortable. It is hoped that in the future other patients can obtain relief before permanent damage occurs.

CLINICOPATHOLOGIC CONFERENCE

Vanderbilt University Hospital

Polyserositis

This 51 year old white woman was dead on arrival in the Emergency Room on Oct. 11, 1957.

The patient had been completely well until 5 years previously when she had noted the insidious onset of abdominal swelling. At that time she was admitted to another hospital where thoracentesis and paracentesis were performed without diagnosis. Because of recurrent ascites she underwent an exploratory laparotomy. There were numerous small dilated vascular spaces scattered over the entire peritoneal surface and one area of capsular thickening on the liver. There was no evidence of portal hypertension, and biopsy of the liver apparently did not provide a diagnosis.

Because of recurrent ascites requiring repeated paracenteses, she was admitted to Vanderbilt University Hospital on Aug. 15, 1956.

Past history was essentially noncontributory. There was no history of jaundice, melena, hematemesis, or increasing prominence of abdominal veins. Her diet had been adequate. There was no history of fever. She denied alcoholic intake and had always lived in Tennessee.

Physical examination at the time of admission to Vanderbilt Hospital revealed a blood pressure of 140/90 mm.Hg., pulse rate of 98/min., and respiratory rate of 28/min. The patient was a thin white woman with a protuberant abdomen. Significant physical findings included brawny indurated edema of the lower extremities and dilated superficial veins over the lower extremities. There was a 10 by 10 cm. soft, fluctuant, subcutaneous mass between the breasts that appeared to be a mass of dilated veins. Examination of the chest revealed signs of pleural fluid bilaterally. The abdomen was grossly distended with ascites. Pelvic and rectal examinations were not performed.

Laboratory Data:

Urine. Specific gravity 1.024, pH 5.5, protein 2+, sugar 0, microscopically 0-2 RBC., 0-2 WBC., numerous bacteria.

Blood. Hematocrit 41.4%; Hgb. 12.5 Gm., WBC. count 5,250 cu.mm. with 73% segs., 1% eos., 12% lymphs., 14% monos., and adequate platelets. Fasting blood sugar—91 mg., N.P.N.—40 mg., total serum proteins—6.3 with albumin/globulin ratio of 3.0/3.3 Gm. per 100 cc. Alkaline phosphatase—10.4 Bodansky units, serum bilirubin—total 1.1 mg. with direct of 0.3 and indirect of 0.8 mg. per 100 cc. Cephalin flocculation—1+, thymol turbidity—7 units, and blood volume 20% greater than calculated normal.

*From the Department of Medicine and Pathology, Vanderbilt University School of Medicine, Nashville, Tennessee.

Bacteriology. Abdominal fluid and chest fluid showed no growth. No other studies were performed on the pleural or abdominal fluids. Tuberculin test was not done.

X-Ray Studies. Chest—both lung bases were obscured with a fluid type of density up to the level of the 2nd rib anteriorly. The apices were clear. The heart appeared unremarkable. *Esophagram*—A small diverticulum of the mid portion of the esophagus was noted; no other abnormality was seen. Specifically there was no evidence of varices.

A thoracentesis and a paracentesis were performed with removal of 11,000 cc. of fluid from the abdomen. During her hospitalization she remained relatively asymptomatic. She was discharged without diagnosis on the 7th hospital day.

During the year prior to her final admission she had persistent ascites and pleural fluid despite a low salt diet. Frequent paracenteses were required with removal of 8 to 10 liters of fluid each month. On the day of death she was scheduled for readmission to the hospital because of massive ascites and pleural effusions, but expired in transit.

Discussion

DR. ROBERT B. COUCH: The case for today has a very simple history. This woman entered Vanderbilt Hospital with evidence of marked fluid accumulation in both pleural cavities, the peritoneal cavity and both legs. This apparently had onset with ascites five years previously. Abdominal exploration one year after onset revealed dilated vascular spaces in the peritoneum, a thickened liver capsule, absence of portal hypertension and a non-diagnostic liver biopsy. Ascitic fluid apparently accumulated rapidly as evidenced by the necessity for frequent paracenteses and she died 5 years after onset of her symptoms.

The paramount feature of this patient's illness is the edematous state that began with ascites.

I. Physiologic explanation for edema.

Since the final common pathway for retention of excess fluid is the kidney, this seems a logical place to begin.

1. Renal disease.—Considered from the point of view of the functioning nephron population, the evidence is against any serious deficit. The absence of nocturia, elevated blood pressure, anemia, eye ground changes and urinary casts is strong evidence against nephritis as a cause of this edematous state. These negatives combined with a urine specific gravity of 1.024 and only a

borderline N.P.N. elevation allows one to rule out nephritic type renal disease.

The nephrotic syndrome cannot be so affirmatively ruled out. Though the patient had hypo-albuminemia, a urinary protein of only 2+ suggests that nephrosis was not present. Without a quantitative urine protein and serum cholesterol one cannot rule out the nephrotic syndrome but the 2+ proteinuria and the presence of the other findings in the case make it unlikely. I think the borderline serum non-protein nitrogen and 2+ proteinuria will be explained either by passive congestion of the kidneys or chronic pyelonephritis.

2. Liver disease.—Although the evidence is not very convincing, this woman apparently carried a diagnosis of cirrhosis to the time of her death. The absence of jaundice or a history of jaundice, a history of alcoholism, cutaneous spiders, palmar erythema, or evidence of complications of cirrhosis such as esophageal varices, G.I. bleeding, or hemorrhoids are all evidence against cirrhosis. When one adds to this the knowledge that portal hypertension was not present after onset of ascites, a liver biopsy was nondiagnostic, and cephalin flocculation was normal with thymol turbidity and bilirubin barely abnormal after five years of disease one can safely rule out cirrhosis.

The alkaline phosphatase elevation must be explained. When one considers other diseases involving the liver parenchyma such as sarcoid, malignancy, tuberculosis and other chronic infections one is left without the many other findings that should be present. For each the exploration and biopsy should have provided a diagnosis. I think the information we have allows us to rule out parenchymal liver disease as the primary explanation for this patient's edematous state. This leaves chronic passive congestion as the only reasonable explanation for the elevated alkaline phosphatase. We must then consider venous obstruction above the liver.

3. Hepatic vein obstruction (Budd-Chiari Syndrome)—This disorder is usually secondary to intrahepatic disease which we have already ruled out, or polycythemia or trauma, neither of which was present. In addition, even in its longest course more evidence of hepatocellular damage would

be present than is evidenced here. These two reasons are sufficient to make this site for venous obstruction unlikely.

4. Inferior vena caval obstruction.—Obstruction of this vessel above the liver would explain virtually everything the patient exhibited. This diagnosis would be more compatible with the long survival and would explain the congestive hepatomegaly and ascites, edema of the legs, congestion of the kidneys with resultant proteinuria and the bilateral pleural effusions. The latter would be related to venous hypertension in the Azygos and lumbar vein systems. This venous hypertension might also produce functional obstruction to lumbar veins and explain the dilated vascular spaces of the peritoneum. One cannot, however, reconcile the report of dilated veins of the chest wall with this diagnosis. Venous obstruction at the superior vena caval level might explain this finding. To attribute it to a hemangioma arising in this age group would be unacceptable.

5. Inferior and superior vena caval obstruction.—Venous drainage of the mid chest wall is by way of the internal mammary veins. These in turn drain to the superior caval system and obstruction to this system would produce the dilatation described. This circuitous reasoning supports superior vena caval obstruction but one must emphasize that a venous pressure measurement in an antecubital vein would have settled it beyond question. The site of an obstructing lesion would then be in the chest. Information available from X-rays supports the fact that no expanding mediastinal mass is present. One would then have to postulate a constricting mediastinitis, such as might result from Tuberculosis, to produce the venous obstruction. This possibility must remain one of our foremost considerations.

6. Constrictive pericarditis.—This disease would produce functional superior and inferior caval obstruction and could produce all the findings in this patient. The disease usually has onset with ascites, the heart is *usually* of normal size, pleural effusion is common, and the resultant passive congestion would explain this patient's liver and renal findings. The blood volume is elevated in this disease though a systolic blood

pressure of 140 and a pulse pressure of 50 is unusual. This diagnosis must remain prominent in our considerations.

7. Other Chest Diseases.—There is no support from the clinical story or x-rays for pulmonary disease, apart from pleural effusions, that might produce failure of the right heart. Likewise there is no support for valvular or myocardial disease of the heart. While we don't have evidence to rule out all these possibilities neither do we have sufficient evidence to rule them in.

II. *Exudative causes of edema*.—With the duration of disease and the lack of more marked protein depletion from the repeated paracenteses this must have been a watery effusion.

1. Tuberculosis.—This disease can give rise to large watery effusions, but to have bilateral pleural involvement with sparing of the lung apices, and peritoneal involvement without fever, anemia or signs and symptoms of chronic granulomatous disease would be unlikely. This same reasoning would hold for other granulomatous diseases.

2. Neoplastic disease.—One would have to propose malignant neoplastic disease to explain the fluid accumulation in all these sites. The duration of survival is incompatible with most malignant diseases except possibly lymphoma and absence of lymphadenopathy, anemia, fever and weight loss make this unlikely. Because of the reported vascular lesions, special consideration was given to angiosarcoma. When one considers the fact that the average survival is only two years, the tumors are usually necrotic, 50% are in children, and the occurrence is rare, then one can safely rule out angiosarcoma.

3. Chronic Polyserositis (Concato's Disease).—It is difficult to make definitive statements on this disease as very little is written though referrals to this entity were encountered in working up this case. It apparently is a low grade inflammatory disease that involves all serous surfaces. Fluid is exuded and thick fibrous serosal coverings develop. Constrictive pericarditis is common and the course is prolonged as in this case. Concato thought this was "low grade" tuberculosis but this is no longer accepted. Other European authors

think it is a collagen disease. In this country it is mentioned as one of the causes of constrictive pericarditis. It cannot be excluded in this case.

III. Disease Entities

1. Hemochromatosis and amyloidosis. Consideration was given to these two entities. The fact that the patient is a female is evidence against the former and the negative exploration is evidence against both. However, we do not have sufficient information to rule in or out either possibility.

2. Meig's Syndrome.—This syndrome of solid ovarian tumor with ascites and hydrothorax must be considered in this patient. The ovarian tumors may be any of several types and without benefit of pelvic examination we cannot give further consideration to this entity.

Conclusion: Three diseases stand out in my mind as explanations for this patient's disorder. These are inferior vena caval obstruction, inferior and superior vena caval obstruction, and constrictive pericarditis. The most likely etiology for all would be tuberculosis. As mentioned previously, we cannot exclude certain other diagnoses but neither positive nor negative information allows us to seriously pursue them.

I shall assume that my reasoning for the presence of superior caval obstruction is valid and this woman had either mediastinal disease producing superior and inferior caval obstruction or constrictive pericarditis. From a statistical point of view I favor constrictive pericarditis of a tuberculous origin.

Autopsy Findings (V-57-235—autopsy done by Dr. James Phythyon).



FIG. 1.



FIG. 2.

Pathology Discussion

DR. ROBERT G. HORN: External examination showed, in addition to the dilated mass of veins over the sternum, very prominent dilated veins in the subcutaneous tissues of the thorax, abdomen, and extremities. Some of these veins were thrombosed.

The abdomen was quite protuberant and, on incising the peritoneal cavity, eight liters of slightly turbid, straw-colored fluid was encountered. All peritoneal surfaces were extremely thickened and fibrotic; this was most prominent over the liver and spleen, as is indicated in figure 1 which shows cross sections of these organs. There were scattered fibrous adhesions between contiguous surfaces, but no evidence of an active inflammatory process was present. Dilated veins were found in the omentum and mesentery; some of these dilated vascular channels appeared to communicate with the veins previously described on the anterior abdominal via bridging adhesions, and veins over the stomach also communicated with large esophageal varices. The portal venous system showed some dilatation, but it was not thrombosed or otherwise occluded. The liver showed a very severe acute and chronic passive congestion.

Each pleural cavity contained a liter of transudate, and the pleural surfaces were likewise thickened and fibrotic. Only a few apical adhesions were present. The pericardial cavity was totally obliterated by thick fibrous tissue which firmly encased the heart. The heart was of normal size and, except for the pericardial adhesions, was completely normal.

Gross examination failed to give any insight into the etiology of this marked poly-

serositis, and microscopic examination added to our understanding only in a negative sense. As is shown in the photomicrograph (Figure 2), the serosal surface of the pericardial surface consisted of a thick layer of rather acellular hyalinized connective tissue, without any signs of an active inflammatory process. It is perhaps instructive to note that this serosal fibrous tissue is "plastered on" to the epicardial surface and that the connective tissue does not insert itself into the epicardial tissue, such as would be expected if this scarring were the result of an old tuberculous serositis. In no tissue examined did we find evidence of any recent or remote granulomatous infection.

It seems highly unlikely, on the basis of clinical history or pathological findings that this process resulted from an old pyogenic polyserositis. No neoplastic process was present to elicit such serosal reaction. Rheumatic fever never produces such a marked serositis. Thus we have excluded to a reasonable degree all of the recognized causes of polyserositis, and we are forced to say that this disease is an idiopathic polyserositis of the type described by Concato and Pick many years ago. Although most authorities now feel that such cases are in fact due to unrecognized tuberculosis, we hope it is clear from the discussion above that we feel some examples of polyserositis of great clinical significance cannot be attributed to the tubercle bacillus.

Persisting polyserositis probably gradually produced constrictive pericarditis by a slow increase of inelastic collagen surrounding the heart. Resulting chronic visceral congestion, coupled with lymphatic obstruction due to peritonitis and pleuritis, accounts for the recurrent ascites; systemic venous engorgement was produced by longstanding elevation of right atrial pressure by the pericardial fibrosis, and perhaps also by some compromise of the orifices of the venae cavae at their entrance into the pericardium. Though we can reconstruct the pathologic physiology in this case, we are completely in the dark as to its basic etiology.

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President's Page

We Should Make Our Position Clear About Relationships with Osteopaths



WILLIAM O. VAUGHAN,
M.D.

The question of ethics is one of the most important and perplexing problems facing members of the Tennessee State Medical Association. In most instances, we have acted like the ostrich burying our head in the sand so as not to see the situation at all. Many times when we considered the problem, we simply swept it aside to be disposed of at a more convenient time.

The action of the House of Delegates at the last American Medical Association meeting will force Tennessee along with all of the state medical associations to take some positive action. The following policy has now been adopted by AMA's House of Delegates:

"1. There can never be an ethical relationship between a doctor of medicine and a cultist; that is, one who does not practice a system of healing founded on a scientific basis.

"2. There can never be a majority party and a minority party in a science. There cannot be two distinct sciences of medicine or two different, yet equally valid systems of medical practice.

"3. Recognition should be given to the transition presently occurring in osteopathy, which is evidence of an attempt by a significant number of those practicing osteopathic medicine to give their patients scientific medical care. This transition should be encouraged so that the evolutionary process can be expedited.

"4. It is appropriate for the American Medical Association to reappraise its application of policy regarding relationships with doctors of osteopathy, in view of the transition of osteopathy into osteopathic medicine, in view of the fact that the colleges of osteopathy have modeled their curricula after medical schools, in view of the almost complete lack of osteopathic literature and the reliance of osteopaths on and use of medical literature, and in view of the fact that many doctors of osteopathy are no longer practicing osteopathy.

"5. Policy should now be applied individually at state level according to the facts as they exist. Heretofore, this policy has been applied collectively at national level. The test now should be: Does the individual doctor of osteopathy practice osteopathy, or does he in fact practice a method of healing founded on a scientific basis? If he practices osteopathy, he practices a cult system of healing and all voluntary professional associations with him are unethical. If he bases his practice on the same scientific principles as those adhered to by members of the American Medical Association, voluntary relationships with him should not be deemed unethical."

Much of this perhaps must be studied further and debated. This is certainly a document of policy that has to be determined with care in Tennessee.

It would seem that until osteopaths have had equal training and education with physicians, they should not be recognized. Those men who are now osteopaths and practicing in Tennessee should not be recognized unless they take further training and pass examinations equal to that of a Doctor of Medicine.

This is a major area for work and study of the Council of our Association and your President urgently recommends such steps be taken immediately. There is practically nothing to be gained by the medical profession or the public in pursuing this matter if it is found that osteopaths continue the practice of cultism. The determination of these matters are now up to the individual state and it is high time that the facts be determined and a policy be adopted by the Tennessee State Medical Association.

A handwritten signature in dark ink, reading "W. O. Vaughan". The signature is fluid and cursive, with a large, stylized "V" at the end.

President

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Address papers, discussions and scientific matter to R. H.
Kampmeier, M.D., Editor and Secretary, 8210 Vanderbilt
University Hospital, Nashville 12, Tennessee
Address organizational matters to Jack E. Ballentine,
Executive Director, 112 Louise Avenue, Nashville 5, Tenn.

R. H. KAMPMEIER, M.D., Editor and Secretary
Vanderbilt University Hospital, Nashville

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NOVEMBER, 1961

EDITORIAL

DIETARY FACTORS REGULATING SERUM CHOLESTEROL

Increasing public interest in the dietary control of serum cholesterol was heightened with a recent announcement of the Board of Directors of the American Heart Association, which stated "Reduction or control of fat consumption under medical supervision with reasonable substitution of polyunsaturated for saturated fats is recommended as a possible means of preventing atherosclerosis and decreasing the risk of heart attacks and strokes." Recently, Norman Jolliffe¹ has summarized the present knowledge regarding those dietary factors which regulate serum cholesterol levels.

In 1952, Groen showed purely vegetarian diets were associated with a fall in serum cholesterol and in the same year Kinsell² demonstrated that the ingestion of certain vegetable oils in place of the customary fats was followed by a major fall in serum cho-

lesterol and phospholipid levels. It is now widely recognized that the substitution of vegetable, fish and marine mammal oils rich in polyunsaturated fatty acids (fish sea-food, soybean, safflower, corn and cottonseed oils and some of the new polyunsaturated margarines) for fats rich in saturated fatty acids (meat fat, eggs, lard, milk and other dairy products) leads in most subjects to a major fall in serum cholesterol and other lipid values.

Changes in the serum cholesterol and other lipid levels is now attributable to the amount and type of various fatty acids contained in the ingested fats or oils. The changes in serum lipid levels are due to one of the following attributes:

1. A reduction in the saturated fatty acids.
2. An increase in the amount of polyunsaturated fatty acids.
3. A change in the net unsaturation as measured by the iodine number.
4. A change in the ratio between the polyunsaturated and saturated fatty acids, P/S ratio. In this calculation of P/S only linoleic acid or its biological equivalents can be included as polyunsaturated fatty acids.

The amount of saturated fatty acids in the diet is the single most important dietary factor in the regulation of serum cholesterol levels. At first it was thought that the total fat was important and a drop in total fat to 15% of the total calories was advocated. This drop in total fat necessitated a drop in saturated fats, but such a reduction involves a qualitative change in the fat if protein adequacy is to be maintained. In such a dietary problem, a much larger proportion of fat actually consumed will be derived from lean meat, white meat of chicken or vegetable sources which contain a very different distribution of fatty acids from the predominant fats derived from cow's milk, eggs and ruminant animal sources.

Although it is possible to increase the P/S ratio by the simple addition of one of the vegetable or marine oils high in polyunsaturated fatty acids to an unaltered diet, the resultant weight gain due to the extra calories is often detrimental. Supplementation of the usual diet without dietary education in reducing significantly the saturated fatty acid component of the diet has not

proved useful in clinical practice. Usually the patient cuts his food intake when the supplement of polyunsaturated fatty acids is given, and if this cut does not limit itself to the saturated fatty acids but is rather an "across-the-board" cut, the diet may be inadequate in micronutrients.

Ahrens³ proposed that the effect of the dietary fats on serum cholesterol levels is a function of their net unsaturation as measured by their iodine number. Fats and oils with iodine numbers of 85 to 144 tended to lower the serum cholesterol while those with iodine numbers of 70 down to 10 tended to raise it. This data showed little difference between the effects of butter fat with an iodine number of 40 and coconut oil with an iodine number of 10; or between corn oil with an iodine number of 126 and safflower oil with an iodine number of 144. Interestingly, there is a very close relationship between the iodine number of a fat or oil and its P/S ratio.

Changing the caloric balance influences the serum cholesterol level, with a positive balance tending to raise the serum cholesterol and a negative caloric balance tending to cause a fall, if other factors such as fat quality remain constant.

Within the range of protein adequacy, the amount of protein in a diet is per se not closely related to cholesterol levels. There are so many sources of high quality proteins that do not carry with them predominantly saturated fats (fish, many nuts, non-fat dairy products, egg whites and white meat of poultry) that the limitation of protein per se for control of cholesterol is not necessary or desirable.

The type of carbohydrate may influence the serum cholesterol. Carbohydrate derived from sucrose and lactose elevates to some extent the serum cholesterol while that derived from cereals, grains, fruits and vegetables is without this effect.

It has been repeatedly shown that the amount of dietary cholesterol within the limitations of any practical dietary (600 to 3,000 milligrams of dietary cholesterol) is without significant effect on serum cholesterol levels in man. Apparently, if the dietary cholesterol is relatively high the biosynthesis of cholesterol from acetate is less. When the dietary cholesterol is relatively

low, the biosynthesis of cholesterol is greater. This would indicate that under the influence of a specific group of factors (genetic, endocrine and dietary) cholesterol biosynthesis attempts to maintain an individual and physiological serum level. This level can be changed by dietary alterations and under the influence of changes in thyroid and cortico-steroid hormones.

In the present state of our knowledge, it would seem wise to advise those patients with a familial predilection to atherosclerosis or who have already had myocardial or cerebral disease attributable to atherosclerosis to follow a dietary regimen conducive to lowering the serum cholesterol level. Such a regimen would attempt to maintain the patient in caloric balance with dietary fats high in the polyunsaturated fatty acids, notably those from vegetable, fish and marine sources. Adequate instruction of the patient has been shown to be essential so that reduction of fats and oils containing saturated fatty acids will be a significant part of the program.

A. B. S.

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DO WE NEED TO POLICE OURSELVES—IF SO, HOW?

Probably most of us hear comments at times by patients, business acquaintances, or friends in the legal profession about what they consider a laxity on our part in taking punitive measures against doctors who transgress the laws of decency, ethics and personal integrity. Management as well as labor have publicly charged us with refusing to clean our house, as they put it, and have been abetted in these accusations by news writers. This had reached such proportions that the Board of Trustees of the AMA recognized the matter by appointing a Medical Disciplinary Committee (November, 1958).

The Committee gathered some information by questionnaires to all the state medical societies, to selected larger county societies and to state boards of licensure. The response from state and county societies was disappointingly small, and was little better in number from the licensure boards. Relatively little was contributed by these questionnaires. The Committee held four regional conferences to which representatives of state medical societies and state boards of medical examiners were invited. Representatives were sent by 27 state medical associations and 24 state boards. At two of the conferences, those in attendance seemed reluctant to discuss disciplinary matters which had been encountered. Those at another conference seemed satisfied that they could cope with their problems. At the fourth conference discussion was full and free. From these conferences the Committee listed unethical or dishonest conduct in collections of surgical insurance fees, testimony in court, and "in addition, there are the abortionists, the narcotic addicts, the alcoholics, the mentally incompetent, and the professionally incompetent. There are those who overcharge; there are those who charge one fee when the patient has no insurance and a much higher fee if the patient is insured. There are those who perform unnecessary surgery. There are those who consort with quacks and fadists. There are those who advertise subtly and those who advertise openly. There are the fee-splitters and the rebaters." In addition, members of the staff of the Legal and Socio Economic Division of the AMA interviewed representatives of 15 state societies and 15 state boards, posing 21 questions related to disciplinary matters and their possible solution. The Committee also met with representatives of the Health Insurance Council and the National Association of Blue Shield Plans. It was suggested by these groups that many abuses and dishonest practices in this field might be improved by review committees and possibly by aid from the national level. From a meeting with representatives of the Association of Casualty and Surety Underwriters the Committee learned that many doctors are guilty of fraud in testimony about injuries and illnesses.

These and other studies were gathered together in a comprehensive report of 50 pages, with appendices listing data, and published in 1961. Furthermore, the Committee reported out "Conclusions and Recommendations" to the House of Delegates. It was pointed out that though adequate medical disciplinary mechanisms exist, the frequency and effectiveness of their use is *less impressive* and "there has been a failure, in some areas, to act promptly, impartially, and objectively when the necessity arises." Therefore a number of recommendations were made.

One recommendation is that a series of lectures be given medical students to acquaint them with ethical and socio-economic principles. From many years as a teacher I believe this will not be very effective. The student cannot see clearly the application of such matters. I am much more impressed with another suggestion, however, namely that the lectures of this type be provided in the hospitals accredited for internship and residency training, for here the application of the desired principles may be seen in everyday hospital practice. At this level the information is much more pointed than for the undergraduate. I would agree that efforts at instruction in this field should be tried out in the ranks of the Student American Medical Association where the climate would be different from that of the formal classroom.

Recommendations pointed towards state boards of medical examiners are very pertinent. The evolution of better methods of providing for disciplinary action is essential. Medical practice acts all too often do not provide machinery for punitive action except possibly in the case of the abortionist, narcotic addict or murderer. The suggestion that the Federation of State Medical Boards draw up model rules of procedure for disciplinary action is excellent, and we hope such will be done and then that state medical associations would aid in having medical practice acts of their states either amended or replaced by new ones.

In recognition of the apathy of initiating any disciplinary action in county societies, especially small ones where every day contact between its members militates against such action, the AMA Medical Disciplinary

Committee has offered recommendations which should be seriously considered. State associations are in a better position to be objective and should consider the suggestion that:

"State medical associations amend their By-Laws to provide that the state association may take necessary disciplinary action when it believes that serious violations of ethical principles have occurred without necessary corrective action being taken first at local level or when the state association believes that serious charges brought against an individual are not being given proper or prompt consideration by the disciplinary committee of a county medical society concerned." Furthermore it was recommended that:

"Each state medical association and all doctors within the state give increased support to the state board of medical examiners as it seeks to obtain proper appropriations for the conduct of its affairs and that the state medical association and its membership be concerned with selection of qualified and dedicated members for its state board of medical examiners."

In addition, it was suggested that:

"The By-Laws of the American Medical Association be changed to confer original jurisdiction on the Association to suspend or revoke the AMA membership of a physician guilty of a violation of the Principles of Medical Ethics or the ethical policy of the American Medical Association regardless of whether action has been taken against him at local level. . . ."

"Finally, your Committee recommends that American medicine at the national, state, and local level maintain an active, aggressive, and continuing interest in medical disciplinary matters so that, by a demonstration of good faith, medicine will be permitted to continue to discipline its own members when necessary."

Though it has been said many times on these pages that there are very few "rotten apples" in our professional barrel, members of the Board of Trustees and other officers, members of the Insurance Committee and members of the Committee on Public Relations have the "rotten apples" brought to their attention. Admittedly little if anything has been done about it in most of these instances. We have already indicated that the reasons for failure of action are obvious and understandable in terms of human relationship. It must be agreed with the Medical Disciplinary Committee of the AMA that something should be done about these matters for they are of every day discussion among the lay public, granted though it is late and is being done under the pressure of public opinion.

Our state association must assume a greater responsibility in these matters.

R. H. K.

DEATHS

Dr. Odie Clarence Doty, 76, Savannah, died October 6th in the Baptist Hospital in Memphis as the result of a heart attack.

Dr. W. F. Price, 82, Chattanooga, died August 6th of coronary heart disease.

PROGRAMS AND NEWS OF MEDICAL SOCIETIES

Greene County Medical Society

The regular monthly meeting of the Society was held at the Elks Club on October 3rd. The meeting was a joint session of the Greene County Medical Society and the Greeneville Bar. Mr. John Armstrong of the Bar Association spoke on the subject "Workmen's Compensation Laws." Mr. Jay Milligan also spoke on the side of the defendant and reviewed in detail the operation of the law.

Mr. Jack Drake of the Tennessee State Medical Association pointed out the need for better communications between TSMA and county societies. He offered the services of TSMA's staff to the county society.

Hamblen County Medical Society

The regular monthly meeting was held on Tuesday, October 3rd at the Health Center in Morristown. The guest speaker was Dr. H. L. Neuenschwander, Knoxville, who discussed the subject "Allergies."

Mr. Jack Ballentine, Executive Director of TSMA, briefly spoke on the Tennessee Plan and activities being conducted by the State Association.

Roane County Medical Society

The monthly meeting consisted of the Dwight Clark Memorial Program conducted on October 30th at the Jefferson Junior High School auditorium in Oak Ridge.

Dr. Lester Dragstedt was the speaker and his subject was "Why Does the Stomach Not Digest Itself?"

Open House at the ORINS Administration Building was held on October 30th to honor Mrs. Elinor Clark and Dr. and Mrs. Lester Dragstedt. Dr. Dragstedt is Emeritus Professor of Surgery at University of

Chicago and Research Professor of Surgery at the University of Florida.

A dinner meeting for the society was conducted on October 31st at the Holiday Inn. The regular meeting of the society followed and Dr. Dragstedt presented the topic of "Physiological Principles in the Surgical Treatment of Peptic Ulcer."

Memphis-Shelby County Medical Society

The Society held its regular meeting on August 1st in the Institute of Pathology Auditorium of the University of Tennessee Medical Units.

Dr. Wm. T. Satterfield gave a report on the status of the investment and retirement fund of the society. The program was presented by Dr. Robert McBurney and consisted of the following: Mr. E. A. Thieman of Louisville, Kentucky, spoke on the subject "The Business Side of Medical Practice."

A special meeting of the society was conducted on September 19th at the Memphis Country Club. The speaker was Dr. George M. Fister, Ogden, Utah, president-elect of the American Medical Association. Some 300 doctors and their wives attended. Dr. Fister's subject was "The Dangers of Social Security Medicine."

At the special meeting, an award for meritorious service was presented to Dr. Wm. C. Chaney who has served twelve years as a delegate of TSMA to the American Medical Association.

Nashville Academy of Medicine and Davidson County Medical Society

The Academy's regular meeting was conducted on October 10th in St. Thomas Hospital. The meeting was preceded by a dinner.

The scientific program consisted of a discussion by Dr. Duane Catterson on "Aerospace Medicine." Dr. Catterson is with the Aerospace Medicine Department at the Lovelace Foundation for Medical Education and Research, Albuquerque, N. M.

The St. Thomas Hospital visiting medical staff held its October meeting jointly with the Academy, and obtained Dr. Catterson as guest speaker for this occasion.

Marshall County Medical Society

The monthly dinner meeting of the So-

ciety was held at the Southland Cafe on September 19th. The program consisted of a film entitled "External Cardiac Massage" presented by Smith, Kline and French Laboratories.

Consolidated Medical Assembly of West Tennessee

The Society conducted its regular monthly meeting on October 5th at the New Southern Hotel in Jackson. The meeting was sponsored in conjunction with the annual Cardiac Day Symposium sponsored by the West Tennessee Heart Association.

Chattanooga-Hamilton County Medical Society

The regular meeting was conducted on October 3rd in the Interstate Building. The scientific program was presented by two Chattanooga physicians. Dr. Joseph W. Graves spoke on "Thyroid Disease in Hamilton County," and Dr. Philip H. Livingston spoke on "Cardiac Arrhythmias."

NATIONAL NEWS

The Month in Washington (From the Washington Office, AMA)

The American Medical Association and the federal government declared all-out war on medical quacks and charlatans who bilk the sick and gullible of hundreds of millions of dollars each year through useless gadgets, phony nostrums, fake reducing pills and the many other gimmicks of the medicine show trade.

The campaign was launched at the First National Congress on Medical Quackery, under joint sponsorship of the AMA and the U. S. Food and Drug Administration, October 6-7 at the Sheraton-Park Hotel in Washington.

Among the keynote speakers were two top officials in President John Kennedy's cabinet, Secretary of Health, Education and Welfare, Abraham A. Ribicoff and Postmaster General J. Edward Day. Leonard W. Larson, M.D., president of the AMA, and Oliver Field, Director of the AMA Department of Investigation, spoke for organized medicine.

Others on the program included Herbert J. Miller, assistant U. S. attorney general in charge of the criminal division; George P. Larrick, commissioner of the FDA, and Paul Rand Dixon, chairman of the Federal Trade Commission.

Other speakers included representatives of the American Cancer Society, the Arthritis and Rheumatism Foundation, and the National Better Business Bureau.

C. Joseph Stetler, director of the Legal and Socio-Economic Division of the AMA presided at the meeting.

Many state and county medical societies from throughout the nation sent representatives to the Congress. They carried back to their societies plans for cooperation with enforcement agencies at the local level and for a step-up of public education on the subject in an accelerated campaign against quacks.

Highlights of the talks included:

—Larson: "We must educate the public thoroughly and effectively. We must wage psychological as well as scientific warfare. We must not only prove the worthlessness of quackery, but we also must establish confidence in sound medical and health care.

"Speaking for the American Medical Association and our 180,000 physician-members, I pledge our efforts to the final eradication of quackery and all its minions and satraps."

—Ribicoff: "The total cost of unnecessary or dangerous medications in this country probably exceeds \$1 billion each year. Much of this expense is to men, women, and children who dearly need this money for good medical care or for other necessities of life.

"But quackery's costs in dollars only introduces the story. In terms of false hopes raised, in terms of ugly delusions fostered, in terms of tinkering with human life itself, the cost cannot be measured. The quack flirts with disaster. He challenges the sixth Commandment: 'Thou shalt not kill.'"

—Larrick: "The most widespread and expensive type of quackery in the United States today is in the promotion of vitamin products, special dietary foods, and food supplements. Millions of consumers are be-

ing misled concerning their need for such products. Complicating this problem is a vast and growing 'folk-lore' or 'mythology' of nutrition which is being built up by pseudo-scientific literature in books, pamphlets, and periodicals. As a result, millions of people are attempting self-medication for imaginary and real illnesses with a multitude of more or less irrational food items. Food quackery today can only be compared to the patent medicine craze which reached its height in the last century. Especially disturbing is the tendency shown by some big and hitherto respected food concerns to use quackery in their sales material."

—Dixon: "Properly drafted and administered, legislation giving the Federal Trade Commission power to issue temporary cease-and-desist orders would, while observing all the requirements of due process, make it possible to protect the public interest more adequately in many areas.

"Although in the case of food, drug, and cosmetic advertising, the Commission can . . . apply to district courts for temporary injunctions, it would be much more efficient for the Commission itself to issue temporary orders in those cases as well as in others."

—Day: "The peddling of fake medical cures is the most prominent fraudulent activity conducted through the U. S. mails today. This huge 'industry'—and it has grown to that extent—is so prevalent and so widespread that it taxes the manpower of the Postal Inspection Service to the utmost in trying to bring the perpetrators to justice.

"We are doing everything we can to make more of our inspectors available to work on cases of this nature, to the extent it will not jeopardize enforcement in other fields."

Dr. L. Henry Garland, American Cancer Society: "The charlatan is in business to make money and he does so by offering *hope*. He tends to be courteous, optimistic, easily understood by the laymen, and confident that cure can be obtained. His patient does not care that the method used is a secret one, that the testimonials are largely fraudulent, or that the 'doctor' may not even be licensed. All he knows is that he is being reassured and treated by some-

one who seems to be interested in him as a person.

"If it is granted that the causes of charlatanism are . . . diverse, it seems obvious that control must be equally diverse—composed of the difficult and slow triad—public education, professional education and continued research in cancer prevention."

—Dr. R. W. Lamont-Havers, Arthritis and Rheumatism Foundation: "That this is a large problem is indicated by the estimated 250 million dollars a year that arthritic victims spend upon unproven, and misrepresented products in a vain attempt to obtain unrealizable relief from their suffering. Not all of these products are quackery in the sense of being useless.

"Some contain active ingredients—usually salicylates, or apparatus such as vibrators, but are promoted with such misrepresentation of effects that the arthritic fully expects results beyond the capabilities of the drug. Others are outright quackery and include such popular items as alfalfa tea, uranium pads, honey and vinegar, etc. Of particular concern are the widely advertised so-called 'clinics,' chiefly in Missouri and Florida."

—Field: "We would like to envision the time when we can cease to worry about the medical quack. But it's going to take an awful lot of doing. The Food and Drug Administration, the Post Office Department, the Federal Trade Commission and the Food and Drug groups of many states of the Union, cannot do the job alone. It takes a program which seeks to acquaint the public with the problem, and swings into action quickly when there is a threat to the community or to the nation at large. This takes the help of all interested people—consumer groups, educational groups, religious organizations, and, most of all, those responsible for the education of the American youth. . . . The emphasis should be on letting the public know, strengthening the laws where necessary, but, most of all, providing a means of distinguishing between the legitimate medical practitioner and the one who pretends to be one."

Social Security Medicine

President Kennedy, according to the Associated Press, will urge Congress to give

"the highest priority" next year to legislation to tie compulsory medical care to Social Security. The president was quoted as saying that medical costs "represent the greatest of all threats to economic security in old age."

MEDICAL NEWS IN TENNESSEE

518,775 Persons Hospitalized in State During 1960

A total of 518,775 persons spent some time during 1960 in 154 hospitals in Tennessee. The President of the Tennessee Hospital Association has stated there was an average daily census of 24,672 occupying a possible 29,217 hospital beds in Tennessee. The report stated that 112 hospitals reported 70,375 births.

Statistics published in the *Journal of the American Hospital Association* revealed there were 29,090 persons working full-time in Tennessee hospitals last year. In hospitals specializing in short term care, the ratio is 231 employees per 100 patients.

Out of each dollar hospitals receive from patients, better than 65 cents goes toward salaries of hospital personnel.

Tennessee Public Health Association

More than 700 public health physicians, professional personnel and civic association delegates gathered in Nashville on October 4th for the 22nd annual meeting of the Tennessee Public Health Association. The meeting was conducted over a three day period.

Dr. A. L. Gray, executive officer of the State Board of Health in Jackson, Mississippi, was one of the principal speakers. Others included, Dr. W. H. Aufranc, medical director of the United States Public Health Service and Dr. Frank Moore of Jackson, Tennessee.

Workshops by specialty groups included health officers, nurses, laboratory technicians, sanitarians, statisticians, clerks and health educators.

New Health Center at Jackson

The new Public Health Center, located on the grounds of the Jackson-Madison

County General Hospital, was dedicated on September 17. The new center has 14,000 sq. ft. of floor space and was built at a cost of \$395,750.

It houses the City-County Health Department, the Jackson Laboratory and the West Tennessee regional office of the Tennessee Health Department. Some 35 persons are employed at the center with an annual payroll of approximately \$171,780 a year. Dr. R. H. Hutcheson, State Public Health Commissioner, was the principal speaker at the dedication where he pointed out that the facility was dedicated to the services of humanity.

East Tennessee Radiological Society

The Society met on September 23rd at Gatlinburg, where the following officers were elected: President—Dr. James Jacob Range, Johnson City; Vice-President—Dr. Thomas S. Long, Chattanooga; President-Elect—Dr. Clifford L. Walton, Jr., Knoxville; Secretary-Treasurer—Dr. J. Marsh Frere, Jr., Knoxville.

Health Information Bureau to Be Established in Nashville

A central health information bureau to aid persons needing medical care, supplies and advice is being readied at Nashville. The center is sponsored by the Nashville Academy of Medicine. The center would coordinate information pertaining to health needs and make such information available to the public.

It was reported that the bureau would also evaluate retarded children and advise families on sources of financial aid for medical care.

Mental Health Foundation Established in Chattanooga

A foundation to promote training, research, and treatment in the field of mental health has been established in Chattanooga with Dr. Joseph W. Johnson, Jr. as president.

The new research group is to be called the "Chattanooga Area Foundation for Research, Training, Treatment and Teaching in the Mental Health Disciplines, Inc."

Other officers and board members include prominent physicians and civic leaders and citizens in the Chattanooga area.

UT College of Law Institute

The 22nd annual college of law institute was conducted in Knoxville on October 6th. Dr. Charles J. Frankel, Professor of Orthopedic Surgery at the University of Virginia, was the principal speaker. He offered advice to the group of doctors, lawyers, drug and insurance representatives, attending the session, pointing out that if doctors and lawyers work together, there will be fewer malpractice cases. It was pointed out that only 25% of the law suits filed against doctors have any real evidence for such actions.

Dr. Frankel urged lawyers to learn the difference between negligence in an operation and the normal consequences that might result from any case. He recommended a special committee to hear malpractice charges out of court and stated that it might help to solve the problem.

The one-day institute was jointly sponsored by the University of Tennessee College of Law and the Knoxville Bar Association.

West Tennessee Heart Association

A symposium on treatment of heart diseases was conducted at the New Southern Hotel in Jackson on October 5th. The meeting was held in conjunction with the joint meeting of the Northwest Tennessee Academy of Medicine, Consolidated Medical Assembly of West Tennessee and the Henry County Medical Society. Some 50 physicians throughout West Tennessee attended.

The principal speaker was Dr. A. H. Schwichtenberg, chief of Aerospace Medicine at the Lovelace Foundation at Albuquerque, New Mexico.

In a symposium on the program called "Cardiac Day," other featured speakers in addition to Dr. Schwichtenberg were: Dr. Daniel A. Brody and Dr. I. Frank Tullis, both of Memphis.

Closed chest cardiac resuscitation, a new procedure of applying pressure to the human chest to make the heart pump blood, was the topic of discussion preceding the evening dinner.

Vanderbilt University School of Medicine

Two new grants of funds totaling \$95,428 have been made by the National Foundation for the continued operation of the polio

and birth defects centers conducted by Vanderbilt.

University of Tennessee College of Medicine

The Department of Medical Laboratories has been awarded \$25,720, a renewal of the St. Jude research grant for the study of sickle cell anemia. The funds will support the research work in hematology.

Five Memphis physicians have been named assistants on the staff. They are: Dr. Melvin Wayne Deweese, ophthalmology; Dr. Robert Paul Kline, obstetrics and gynecology; Dr. John P. Nash, surgery; Dr. Vernon I. Smith, radiology; and Dr. Wade R. Murdock, internal medicine.

Research Center at Knoxville

A \$12,190 grant made by the National Institute of Health to study muscles and their function in certain diseases has been awarded to the UT Memorial Research Center at Knoxville. The grant was made to Dr. Bernard G. Stall, III.

U-T Development Council

Six new members have joined the University of Tennessee Development Council. The Council composed of professional and civic leaders from throughout Tennessee, promotes the development of UT through gifts and grants from businesses, foundations and individuals. One of the newly appointed members of the council is Dr. Roland H. Myers, Memphis. The other members appointed were laymen.

PERSONAL NEWS

Dr. Wesley F. Jones, Jr. announces the opening of his office for the practice of medicine in Lexington.

Dr. Arnold M. Meirowsky and **Dr. C. David Scheibert**, Nashville, announce the removal of their offices to the Mid State Medical Center.

Dr. Charles Mitchell, Sparta, is Chairman of the White County Blood Program.

Dr. Charles C. Smeltzer, Knoxville, has been appointed to a national advisory committee to the AMA dealing with communications problems.

Dr. Wilson W. Powers, has been named President of the newly organized Knox County Chapter of the Arthritis and Rheumatism Foundation.

Dr. E. P. Muncey, Jefferson City, recently addressed the PTA.

Dr. Stewart Lawwill, Jr., Chattanooga, has been made a Fellow of the American College of Surgeons.

Dr. J. K. Twilla announces that **Dr. J. W. Tenpenny** will be associated with him in the general practice of medicine and surgery at Smithville.

Dr. A. T. Hicks, Camden, has been named medical examiner for Benton County.

Dr. Alex B. Shipley, Knoxville, has taken office as President of the Tennessee Public Health Association.

Dr. Laurence A. Grossman, Nashville, recently addressed the Nashville Lions Club.

Dr. Joseph B. Killebrew, Chattanooga, is moving to Nashville where he will be on the teaching staff of the new Veterans' Administration Hospital.

Dr. William A. Nelson, Knoxville, has been named chairman of the 1961 Christmas Seal Campaign by the Knox County Tuberculosis Association Board.

Dr. McChesney Goodall, Jr., Knoxville, addressed the Rotary Club where his subject was "UT Memorial Hospital Research."

Dr. Louis P. Britt, Memphis, will assume full-time duties as medical director of Les Passees Rehabilitation Center. His new assignment will be effective January 1st, 1962.

"Nutritional Aspects of Public Health" was the topic of **Dr. Nobel Guthrie**, Memphis, before a meeting of the Memphis Dietetic Association.

Dr. John B. Steele, Chattanooga, will be awarded a special day on October 18th by the Legion Luncheon Club.

Memphis physicians giving papers before the Clinical Congress of the American College of Surgeons were: **Drs. Harwell Wilson, William Lee, Robert McBurney, Richard DeSaussure, Roger Sherman, James Pate, Edward Storer**. An exhibit on plastic surgery procedures was presented by **Dr. Anthony Jerome** and **Dr. Peter Oliva**, Memphis.

Dr. J. D. Connell, Halls, has begun the practice of medicine at Dyersburg where he is associated with **Drs. Thomas Johnson, W. I. Thornton** and **Huey Holt** at the Dyersburg Medical Center.

Dr. G. Sydney McClellan, Nashville, has been named President of the Nashville-Davidson County Unit of the American Cancer Society. Other officers named included **Dr. Edmund W. Benz**, vice president and **Dr. Barton McSwain**, chairman of the executive board.

Dr. Wm. M. Davis, Decatur, has moved to Alabama where he will practice.

Dr. Louis Ulin, Chattanooga, attended the meeting of the American College of Surgeons in Chicago.

Dr. Robert J. Boehm, Chattanooga, spoke on the subject "Breast Tumor" over a Chattanooga TV station recently.

Dr. E. Harris Pierce, Cleveland, announces the opening of his new office at 2407 Chambliss Avenue, N.W.

ANNOUNCEMENTS

Postgraduate Course in Orthopedics at Vanderbilt University School of Medicine

The Orthopedic Surgery Division is offering a Postgraduate Day on Thursday, November 30, 1961, to be held at Vanderbilt University Hospital, beginning at 9 a.m. Treatment of fractures in the ambulatory patient will be stressed. Fractures, dislocations, and soft tissue injuries of the extremities will be discussed with emphasis on the details of initial treatment and rehabilitation. The recognition and avoidance of complications will be stressed. Dr. Joseph Milgram, Director of Orthopedic Surgery, Hospital for Joint Diseases, New York City, will be the guest speaker and he will discuss the subject "Lower Extremity Muscle Injuries."

The course is approved for Category I credit by the American Academy of General Practice. Tuition is \$15.00 which includes the luncheon. For further information address the Department of Postgraduate Instruction, Vanderbilt University.

New Orleans Graduate Medical Assembly

The 25th annual meeting of the New Orleans Graduate Medical Assembly will be held March 12-15, 1962, with headquarters at the Roosevelt Hotel in New Orleans. Guest speakers will be as follows:

Emanuel M. Papper, M.D., New York, N. Y.
—Anesthesiology

Edward P. Cawley, M.D., Charlottesville, Va.
—Dermatology

Julian M. Ruffin, M.D., Durham, N. C.
—Gastroenterology

Carroll L. Whitten, M.D., Louisville, Ky.
—General Practice

Howard W. Jones, Jr., M.D., Baltimore, Md.
—Gynecology

Thomas M. Durant, M.D., Philadelphia, Pa.
—Internal Medicine

Maxwell M. Wintrobe, M.D., Salt Lake City, Utah
—Internal Medicine

Bernard J. Alpers, M.D., Philadelphia, Pa.
—Neurology

Ralph C. Benson, M.D., Portland, Oregon
—Obstetrics

Victor A. Byrnes, M.D., St. Petersburg, Florida
—Ophthalmology

John M. Moe, M.D., Minneapolis, Minnesota
—Orthopedic Surgery

Albert C. Furstenberg, M.D., Ann Arbor, Michigan
—Otolaryngology

Jeff Minckler, M.D., Denver, Colorado
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—Surgery

John L. Emmett, M.D., Rochester, Minnesota
—Urology

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Edward F. Cole, Orlando, Florida

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PLACEMENT SERVICE

The Placement Service of the Tennessee State Medical Association is designed to assist doctors and communities to get together. Further information and contacts to both physicians and communities are available from the Public Service Office, 112 Louise Avenue, Nashville 5, Tennessee.

Locations Wanted

A 32 year old married physician interested in associating in general surgery practice either clinical assistant or associate in middle or west Tennessee community 10,000 and over. Residency training. Certified American Board of Surgery. Protestant. Graduate St. Louis University School of Medicine. Available immediately. LW-406

A 32 year old married Internist would like group practice or teaching (institution) in Tennessee community of 20,000 and over. East or middle Tennessee preferred. Graduate Harvard Medical College. Two years residency. Available immediately. LW-409

A 40 year old native Tennessean, who is just completing four years residency in general surgery would like to return to practice in Tennessee as assistant or associate general practice with surgery. Will consider clinical or other. Prefers east or middle Tennessee, any size community. Methodist. Graduate University of Tennessee. Available now. LW-412

A 41 year old married, general practitioner, graduate University of Tennessee would like to establish clinical, assistant or associate practice in east Tennessee. Will, however, consider other communities of any size. Tennessee license. Available immediately. LW-413

A 33 year old married physician, presently in Air Force, would like to establish associate practice in OB-GYN with other physician in Tennessee community of 25,000 or over. Graduate University of Tennessee. Three years residency. Tennessee license. Available immediately. LW-414

A 26 year old married Internist with two years residency training in internal medicine and one year residency in pediatrics, would like clinical, assistant or associate practice in any size community any section. Graduate University of Michigan. Available July 1962. LW-419

A 30 year old married physician would like to establish practice in pediatrics in middle or west Tennessee community of 5,000 or over, either assistant, associate or solo. Baptist. Graduate Vanderbilt School of Medicine. Available August 1962. LW-420

A 30 year old married Ob-Gyn physician would like to associate with other physician in any size community, no preference as to location, upon completion of residency. Protestant. Graduate University of Tennessee. Tennessee license. Available fall 1962. LW-422

A 29 year old married general practitioner, now in military service, would like to associate in clinical practice in small east Tennessee community upon completion of his service. One year residency training in internal medicine. Gradu-

ate University of Maryland. Methodist. Available September 1962. LW-423

A 28 year old married physician would like to become associated in clinical practice in any size community of middle Tennessee. Protestant. Graduate University of Tennessee. Presently serving as Flight Surgeon USAF. Tennessee license. Available June 15, 1962. LW-424

Physicians Wanted

Physician in east Tennessee community 6,000 needs associate for general practice. Age 25-35, one year internship. New, private office; examining rooms and equipment available. Hospital located in community. PW-134

Southern Tennessee community of slightly over 600 in need of general practitioner. Trade area much larger. No other physician in community. Office space and some equipment available. PW-147

Small Tennessee community of 1,200 with trade area of 15,000, in lower middle Tennessee needs general practitioner. Two other physicians in community. Excellent opportunity for your physician wishing to establish good practice. Office space and housing readily available. PW-151

Southeastern community of 10,000 in need of general practitioner. Office space available with six months rent free. Eighteen miles from larger city. Good location. LW-154

Physician in middle Tennessee town of 7,000 in need of general practitioner to handle practice for one or two years while he enters residency training. Alternating residency training and possible partnership considered. Rental basis for office and equipment. Excellent opportunity. PW-157

Physician with experience in general practice, OB and/or surgery, needed in middle Tennessee community of 12,000. Will furnish office space, utilities and telephone. Eighteen bed hospital available. Age 30-45. Associate or assistant status. PW-158

One year free rent offered to one or two physicians wishing to locate in thriving east Tennessee town with trade area of 35,000. Seventy-five bed hospital, near TVA dam and recreational area. PW-165

Physician in east Tennessee community with trade area of 40,000 would like associate general practitioner. New, unused, fully equipped 22 room office, only 100 feet from lake. Hospital in area. One year's internship required. PW-166

Two practicing Internists in large eastern city would like an associate to work into full partnership. Large, modern, well-equipped office in a downtown medical office building. Internist with 3 years residency, under 36 years of age, willing to start on straight salary (salary open) for one year desired. PW-167

Physician in east Tennessee city of 2,000 would like to share office and equipment with associate general practitioner. Good housing facilities available. Hospital 15 miles. PW-169

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The authors describe the use of this technic as an office procedure.

The Practical Value of Bronchspirometry*

SHELDON E. DOMM, M.D., DAVID H. WATERMAN, M.D., and
WILLIAM K. ROGERS, M.D.,† Knoxville, Tenn.

Introduction

Bronchspirometry has been available to the medical profession since first done by Jacobens over 25 years ago. Nevertheless, one gets the impression that the procedure is not always accorded its proper value, and is at times considered to be of only academic interest.

We have been increasingly impressed by the practical value of bronchspirometry in certain clinical situations. The burden of this paper is to list some of these situations, and to suggest that the procedure may be of greater practicability than is generally realized, and also to show that bronchspirometry is a feasible office procedure.

Technic

The ventilatory function of each lung (tidal volume, vital capacity, and oxygen uptake) can be recorded independently and simultaneously by the use of a simple spirometer connected to each main bronchus by means of a double-lumen tube in the trachea. The recording is made on a single sheet of graph paper.

The procedure is done under topical anesthesia. The double-lumen rubber catheter designed by Carlens is passed with the aid of the indirect laryngoscope.

Clinical Situations in Which Bronchspirometry Is of Practical Value

A. Bilateral bronchopulmonary disease

*Read at the meeting of the Tennessee State Medical Association, April 11, 1960, Nashville, Tenn.

†From the East Tennessee Tuberculosis Hospital, Knoxville, Tenn.

accompanied by poor over-all ventilatory function.

1. Critically poor function on the side to be operated upon but with fair function on contralateral side.

Case 1. (L.B.) A 35 year old colored man.

Diagnosis: Pulmonary tuberculosis, far advanced; destroyed left upper lobe, imprisoned left lower lobe following 8 year course of pneumothorax; healed disease on right.

Over-all pulmonary ventilatory function studies showed a vital capacity of 3 liters or 70% of the predicted normal, an MBC of 36 liters per minute or 34% of predicted normal, and a walking ventilation of 15 liters per minute with a walking index of 42%.

Bronchspirometry in the office showed the vital capacity on the right to be 1.2 liters with only 0.3 liters on the left. The oxygen uptake was 84% on the right and 16% on the left. In spite of the restricted function left upper lobe lobectomy and left lower lobe pulmonary decortication was performed uneventfully. In spite of postoperative complications, including infection of the pleural space with a bronchopleural fistula requiring relaxing thoracoplasty and closed thoracotomy, the end result was excellent. The patient was cured and went back to work.

2. Critically poor function on contralateral side.

Case 2. (O.F.) A 42 year old white woman.

Diagnosis: Pulmonary tuberculosis, far advanced; extensive bilateral upper lobe disease with bilateral cavities, apparently worse on the right side; the sputum was consistently positive with never a negative, and the patient was shown to be drug resistant.

Over-all pulmonary ventilatory function studies showed a vital capacity of 2.3 liters or about 68% of predicted normal, with an MBC of 50 liters per minute or 58% of predicted normal. Bronchspirometry by Dr. J. L. Southworth at the East Tennessee Tuberculosis Hospital showed a vital capacity on the right side of 1.37 liters with only 0.77 liters on the left side; the percentage was

64% on the right and 36% on the left. Oxygen uptake was 61% on the right and 39% on the left. In spite of these findings which suggested a very poor function on the left side a right upper lobe lobectomy was performed. The patient did poorly on the table, going into pulmonary edema from which she responded with the aid of tracheostomy and positive pressure ventilation. Postoperatively she did poorly. There was a small air leak which resulted in a broncho-pleural fistula, empyema, and death some three months postoperatively.

B. Bilateral bronchopulmonary disease accompanied by marginally satisfactory over-all ventilatory function but with unexpectedly poor function on the contralateral side.

Case 3. (L.H.) A 28 year old white woman.

Diagnosis: Pulmonary tuberculosis, moderately advanced with a questionable cavity right upper lobe; sputum was positive on admission only, negative thereafter; bronchography showed considerable bronchiectasis of the left lower lobe.

Over-all pulmonary ventilatory function studies showed a vital capacity of 2.2 liters or 61% of predicted normal, and an MBC of only 47 liters per minute or 52% of predicted normal. Bronchspirometry at the East Tennessee Tuberculosis Hospital showed 65% of the vital capacity to be on the right and only 35% on the left. Oxygen uptake comparison was similar, 63% on the right, 37% on the left. In view of the unexpectedly poor function demonstrated by bronchspirometry on the left side, it was elected at the therapy conference not to operate for tuberculosis on the right side but rather to follow the patient carefully. She was not operated upon and she has done well to date in every way.

C. Destroyed lung.

Case 4. (L.G.) A 40 year old white woman.

Diagnosis: Bronchiectasis, left lung, total, associated with hemoptysis, productive cough, dyspnea, cyanosis, and evidence of cerebral hypoxia manifested by unclear thinking.

Over-all pulmonary function studies showed a vital capacity of 2.6 liters or 87% of predicted

normal, and an MBC of 72 liters per minute or about 95% of predicted normal. Bronchspirometry in the office was of great interest in this connection showing that the vital capacity on the right was 1.5 liters compared to 0.5 liters on the left but the oxygen uptake on the left side was 0. Left pneumonectomy was performed uneventfully. The result was very gratifying, there being no evidence of cyanosis or dyspnea and the patient being able to think clearly.

Summary and Conclusions

Bronchspirometry is of practical value in a number of clinical situations.

Such therapeutic problem situations include:

A. Bilateral bronchopulmonary disease accompanied by poor over-all pulmonary ventilatory function in which there is critically poor function on the side to be operated. Operation may be done with a good result.

B. Bilateral bronchopulmonary disease accompanied by poor over-all pulmonary ventilatory function in which there is critically poor function on the contralateral side. Operation may be perilous.

C. Bilateral bronchopulmonary disease with marginal indication for surgery, with borderline over-all pulmonary ventilatory function but with unexpectedly poor function on the contralateral side. Operation may well be withheld with good result.

D. Destroyed lung. The referring physician, the patient and the family are encouraged to consider surgery after visualizing the graphic evidence of nonfunction of the involved lung.

Bronchspirometry may be done either in the hospital or in the office.

The author considers the indications for, and results of simple laryngectomy and when accompanied by radical dissection of the cervical nodes.

The Radical Neck Dissection In Laryngeal Cancer Surgery*

JOHN W. CAMPBELL, M.D., Memphis, Tenn.

Introduction

The purpose of this paper is to compare the end results in treatment of carcinoma of the larynx obtained with different forms of therapy used at the John Gaston Hospital in Memphis from 1940 through 1959. Particular attention will be directed toward evaluating the results of laryngectomy with radical neck dissection.

Background

The use of the laryngectomy with simultaneous radical neck dissection for carcinoma of the larynx is not new, though recently it is gaining wider acceptance. Many articles have appeared in the literature recently showing good results with neck dissection for certain types of laryngeal cancer. Some of these will quickly be reviewed and then our results using these operations will be presented.

Norris,¹ in 1959, with 203 cases, reported that recurrence in cervical nodes after a total laryngectomy was more common in cases in which the lesion was not confined to the true vocal cords. His five-year cure rate was higher when laryngectomy was combined with simultaneous radical neck dissection than when total laryngectomy alone was used on such extensive cases. Also, his cure rate was higher when the neck dissection was done simultaneously with the laryngectomy, at the time of the initial operation, than when it was done later after cervical node metastases had appeared. Ogura,² in 1959, reported in a series of 18 patients that 34% of those with carci-

noma of the larynx without palpable nodes at the time of operation, and had laryngectomy with radical neck dissection demonstrated microscopic metastases to the cervical nodes on pathologic examination. Putney,³ in 1958, in a series of 236 cases of carcinoma of the larynx not confined to the true vocal cords or ventricular bands and without palpable cervical nodes at the time of operation, reported that 25% had microscopic metastases when the tissues from neck dissection were examined under the microscope. Ogura,² in 1960, with 59 patients reported the following five year cure rates:

	<i>Laryngectomy</i>	<i>Laryngectomy with Neck Dissection</i>
Endolaryngeal lesions	58%	59%
Subglottic	42%	59%
Extrinsic	16-25%	32%

Pressman,⁴ in 1960, in cases in which he used dyes and radioactive isotopes to trace the lymphatic drainage of the larynx, found that with respect to lymphatic drainage the larynx is highly compartmentalized; each area of the larynx drains to the homolateral nodes without crossover with the rare exception of an occasional crossover through the lymphatics anterior to the larynx in the cricoid region.

Orton,⁵ in 1956, studying 441 cases of carcinoma of the larynx, observed in the cases in which cervical node metastases developed after total laryngectomy that the original lesion was in the supraglottic, subglottic or piriform sinus areas.

Method of Analysis

In analyzing the results of treatment of the cases to be presented in this paper, consideration will be given to location of the

*Read at the meeting of the Tennessee Academy of Ophthalmology and Otolaryngology, April 10, 1961, Chattanooga, Tenn.

lesion, extent of the lesion, duration of the disease, presence or absence of cervical neck node metastases, and form of treatment.

The location of the lesion will be classified as follows: (1) lesions of the true vocal cord, glottic lesions; (2) subglottic lesions, that is lesions extending below the true vocal cord, also called infraglottic lesion; (3) supraglottic lesions, that is all lesions extending above the true vocal cord which may involve the ventricle, false cords, interior of the larynx above the false cords, arytenoids, epiglottis, aryepiglottic fold, piriform sinus, entroitus of the esophagus, pharynx, and base of the tongue; and (4) an additional classification will be made for supraglottic lesions which do not extend up above and beyond the ventricle or false cord. Lesions are to be classified as to whether or not palpable metastases in cervical nodes are present at the time of original operation.

The type of treatment is classified as: (1) total laryngectomy, which includes removal of the larynx from below the cricoid to, and including the hyoid bone and sternothyroid muscle; (2) laryngofissure with removal of the involved cord; (3) irradiation, either by x-ray or cobalt and in most of these cases with 5000 and 6000 R.; and (4) laryngectomy with simultaneous homolateral radical neck dissection.

The radical neck dissection consisted of removing all soft tissues, vessels, nerves, lymphatics from the clavicle to the mandible and from the trapezius to the larynx. All soft tissue superficial to the scalene and digastric muscles and superficial to the carotid artery and its two main branches is removed. The dissection is carried out through a double Y-incision and turning of four flaps. The larynx and the contents of the neck dissection are removed in one block. Care is taken to preserve the external and,

of course, the internal carotid artery, the lingual artery, the hypoglossal, vagus, lingual and phrenic nerves, the mandibular branch of the facial nerve, and the brachial plexus. The material in this study included only complete neck dissection as just described.

During the 15 year period reported in this paper, carcinoma of the larynx was treated by various methods. Generally, it was treated by the method that was considered proper at that particular time. In the first few years at the beginning of this study, many of the more extensive lesions were treated by irradiation. Later many of the lesions which earlier would have been treated with irradiation were treated surgically. During this period all lesions whether glottic, infraglottic or supraglottic were treated with a total laryngectomy if no palpable cervical nodes were present. During this period, if palpable neck nodes were present a total laryngectomy with radical neck dissection was done. During the latter years of this study, total laryngectomy with simultaneous homolateral radical neck dissections were done on a few cases of extensive carcinoma of the larynx in which there were no palpable cervical node metastases.

Eighty cases of epidermoid carcinoma of the larynx were seen during the period covered by this study. Twelve of the patients refused treatment or for some other reason were not treated. This left 68 patients who were treated, the results of which will be studied.

Results are classified as follows: (1) no evidence of residual disease after five years; (2) died of disease; (3) lost to follow up no evidence of disease; (4) lost to follow up with disease; (5) died of other causes with no evidence of disease; and (6) died of other causes with disease.

Results

LESIONS OF THE TRUE VOCAL CORD (19 CASES)						
Treatment (No. of cases)	NED*	DOD*	DOCNED*	DOCWD*	LTNED*	LTWD*
Radiation (3)	2	1				
Laryngofissure (3)	3					
Laryngectomy (10)	6	2	1		1	
Laryngectomy & Rad. Neck (1)	1					
Laryngectomy & Radiation (1)		1				
Stripping vocal cord (1)		1				

*Code corresponds to the numerized designation noted in the text classifying results.

SUPRAGLOTTIC LESIONS (42 CASES)

<i>Treatment (No. of cases)</i>	<i>NED</i>	<i>DOD</i>	<i>DOCNED</i>	<i>DOCWD</i>	<i>LTNED</i>	<i>LTWD</i>
Radiation (21)	2	18				
Laryngectomy (8)	5	3				
Laryngectomy & Rad. Neck (9)	6	3				
Laryngectomy & Radiation (2)		1	1			
Lar. & Neck & Radiation (1)	1					
Radiation and Rad. Neck (1)		1				

It is believed that there is an inadequate number of lesions of the true vocal cord treated in this series with irradiation or laryngofissure for a good evaluation. However, good results were obtained by these methods in this limited group of cases. Laryngectomy was effective in six of eight cases of carcinoma of the true vocal cord in this series.

In this group were many far advanced lesions with palpable cervical metastases. Radiation offered very few cures for these lesions, whereas laryngectomy with radical neck dissection salvaged a considerable number. The laryngectomies without neck dissection in this group were on patients without palpable cervical node metastases. Nearly all of this series of laryngectomy with radical neck dissection was done on patients which had already developed enlarged nodes. You can see that various unusual forms and combinations of surgery and radiation were attempted on a few patients with the results which you see there.

The number of cases in this group is insufficient to make accurate comparison.

During the period from 1940 through 1955, in which the patients of these cases which have been presented were treated, nearly all supraglottic lesions without neck node metastases were treated with total laryngectomy or irradiation. It will be of value to determine the results obtained on these supraglottic extensive lesions which have not yet developed neck nodes, using

total laryngectomy with neck dissection, the procedure which previously had been allotted only for those extensive supraglottic lesions which had already developed palpable nodes. To evaluate this procedure it was necessary to study patients who had been treated since 1955. A few had been treated as long ago as five years and the five-year results can be determined. Several others were found from which we can determine the results of treatment with this procedure after three years. There are 16 of these additional cases reviewed. Only the cases with no evidence of residual disease are counted as cures. Patients which died of the disease or were lost to follow up with the disease were counted as failures. Patients which died of other causes with no evidence of disease or were lost to follow up with no evidence of disease were not included in making this particular evaluation.

The following results were obtained:

Laryngectomy with neck dissection proved to be superior to laryngectomy in cases of supraglottic carcinoma of the larynx which were early enough so no neck node metastases had developed. When the supraglottic lesion did not extend beyond the false cord or the ventricle a larger number of these were cured with total laryngectomy than when the lesion extended up beyond this area, though laryngectomy with neck dissection still gave better overall results. In the more extensive supraglottic lesions, that is those that were up above the

INFRAGLOTTIC LESIONS (7 CASES)

<i>Treatment (No. of cases)</i>	<i>NED</i>	<i>DOD</i>	<i>DOCNED</i>	<i>DOCWD</i>	<i>LTNED</i>	<i>LTWD</i>
Laryngectomy (4)	3	1				
Laryngectomy & Rad. Neck (2)	1	1				
Radiation and Laryngectomy (1)	1					

SUPRAGLOTTIC LESIONS WITHOUT PALPABLE NECK NODES

<i>Specific Location</i>	<i>Laryngectomy (Cures/Failures/%)</i>				<i>Laryngectomy & Neck (Cures/Failures/%)</i>			
All supraglottic lesions (5 yrs.)	5	/	3	/63%	3	/	1	/75%
All supraglottic lesions (5 and 3 yrs.)	5	/	4	/56%	5	/	3	/63%
All supraglottic lesions above false cords (5 yrs.)	2	/	3	/40%	2	/	1	/67%
All supraglottic lesions above false cords (5 and 3 yrs.)	2	/	4	/33%	3	/	3	/50%

false cords, such as lesions of the arytenoids, aryepiglottic fold, epiglottis, piriform sinus, etc., the laryngectomy radical neck dissection was much superior.

The number of cases in this report is relatively small, but the results definitely seem to be forming a trend similar to the results which were reported in the literature.

Conclusions

In this series of cases:

(1) Laryngectomy with simultaneous homolateral radical neck dissection is the treatment of choice in all supraglottic laryngeal epidermoid carcinomas regardless of whether the lesion is early with no palpable cervical node metastases or late with palpable cervical node metastases.

(2) Irradiation was the least effective form of treatment in supraglottic laryngeal carcinomas either with or without cervical node metastases.

(3) Laryngectomy with simultaneous radical neck dissection was relatively more ef-

fective than total laryngectomy alone as a form of treatment when the supraglottic lesion was more extensive, that is when it extended beyond the ventricle and false cords than when the lesion did not extend beyond the false cords.

(4) Total laryngectomy alone gives good results in epidermoid carcinoma confined to the true vocal cord.

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Clinical Use of Lactic Dehydrogenase. R. J. Erickson and D. R. Morales, New England J. Med. 265:478, 1961.

Recently, the determination of serum glutamic-oxalacetic transaminase (SGO-T) was introduced as a diagnostic procedure in cases of myocardial infarction. One limitation has been that the test is positive for only 24 to 72 hours after the damage occurs. Investigation of other enzymes led to the development of the determination of lactic dehydrogenase as a clinical laboratory procedure. The increase in Serum Lactic Dehydrogenase (SLDH) after myocardial infarction has been attributed to the release of the enzyme from dying cells. A semiquantitative relationship has been demonstrated in 50 patients between the release of SLDH and the degree of myocardium damage.

Lactic Dehydrogenase is an enzyme of the glycolytic cycle and reversibly catalyzes the conversion of pyruvate to lactate. During this reaction diphosphopyridine nucleotide (DPNH) is utilized as an oxidizable-reducible coenzyme for the reaction. The determination for SLDH involves the spectrophotometric measurement of the rate at which DPNH is oxidized. Certain precautions are necessary in the determinations of SLDH. Erythrocytes are rich in the LDH and the slightest hemolysis can significantly elevate serum levels in a specimen. Oxalated blood cannot be used for SLDH determinations. Serum obtained from clotted blood after 1 hour at room temperature shows a 25% increase in LDH. Therefore it is imperative to separate the serum within 30 min-

utes after the blood is drawn or to refrigerate promptly. Because of variations in procedures, the normal range of values for SLDH will differ for each laboratory.

After myocardial infarction there is an increase of SLDH of 2 to 10 times the normal value for a period of 3 to 4 days. The large rise makes the SLDH valid for some smaller infarcts in which no significant rise in SGO-T can be detected. Further, the longer period with elevated levels gives the assay an advantage as a diagnostic test. Since other conditions may produce a rise in SLDH, a single determination is not specific for the diagnosis of a myocardial infarct. The rise and return to normal within approximately 4 to 11 days is generally considered to be significant in this diagnosis.

The rise and fall of the enzyme after myocardial infarct is presently used in hospitals and research centers as a valuable aid in diagnosis. Elevations of the enzyme in anemia are of academic interest and much work has been done to develop the SLDH assay in the diagnosis of malignant tumors. Because of the number of conditions in which there may be a rise in this enzyme, increased diagnostic specificity by analysis of the enzyme components or *isoenzymes* through electrophoretic, immunologic, chemical and physical means promises to increase the usefulness of this enzyme to both the research worker and practicing physicians. (Abstracted for the Middle Tennessee Heart Association by Frank R. Blood, Ph.D., Nashville.)

The treatment under the circumstances outlined here may be quite definitive and satisfactory. Proper evaluation of the clinical picture is the primary requisite.

Bladder Neck Obstruction In the Younger Male*

JOHN DOUGHERTY, M.D., Knoxville, Tenn.

A problem repeatedly confronting the urologist is the man under 50 with signs and symptoms of urinary obstruction.

To have supportive information for this paper I have used my records for the years 1959 and 1960. In this group there have been 153 men who were operated upon because of bladder neck obstruction. Of this group 104 were over 50 and 49 under 50 years of age. Considering the latter group as a basis for this paper there were 49 men who fell between the ages of 22 and 50.

The problem in this age group is complex and has been well stated by Dr. Neal Davis in the urologic section of the Nebraska State Medical Journal. To quote from his article: "The commonest misconception is the belief that there can be no prostatic obstruction unless the gland is palpably enlarged per rectum. One reason for the frequently noted discrepancy between size per rectum and degree of obstruction is that it is not the size of the gland that is the critical factor but the degree of encroachment on the urethral lumen. Another reason is that enlarged lobes are often inaccessible to rectal examination. The expanding prostatic mass often herniates through the bladder outlet and takes up a position inside the bladder cavity.

"Another misconception is that without residual urine there can be no significant obstruction. Initially the bladder musculature hypertrophies to meet the increased work load. After compensating for some time, the increased muscle can no longer meet the demand of the work load placed on it and decompensation occurs. Residual urine then develops. A significant amount of residual urine is therefore a late finding

resulting from long standing obstruction. Surgical relief is desirable before decompensation develops."

To wait until there are obvious decompensatory changes may be to encourage the basic change that in time will produce a urologic cripple. An individual persistently symptomatic may have corrective measures carried out but may never gain complete relief; a price is paid for a half measure of stability.

The symptomatology is varied and complex. The individual may notice little more at first than changes in sexual habits or in more extreme cases an annoying nocturia may bring the patient complaining that he cannot get sufficient rest to carry on his work.

The examination of an individual presenting himself with signs and symptoms of bladder neck obstruction has the usual fundamental components that cannot be side tracked or glossed over lightly. A thorough and properly taken history is the first extremely important service the urologist offers the patient. A well done general physical examination is of equal importance. Emphasis on the genitourinary portion of the examination will add to the conviction of the patient that the surgeon is really interested in his difficulties. The old axiom advanced by Dr. Osler that "if you don't put your finger in the rectum you are apt to get your foot in it" will always be true. At this stage the patient is convinced that the surgeon is really sincere.

By this time the surgeon may have reached the opinion that the patient has bladder neck obstruction and in the usual case he concludes that the problem is one of combined hypertrophy and associated enlargement due to prostatitis. At this point a period of several weeks simple treatment to clear up the infection is certainly justi-

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fied. To do so offers many advantages. It will provide a most important opportunity to determine just how much of the obstruction is due to glandular hypertrophy and how much is due to infection. Also numerous small items necessary in the total evaluation of a patient will come to light, particularly his response to drugs, his status of urinary control, his sexual ability, concept of anesthesia, inhibitions as to transfusion and particularly the status of his upper urinary tracts. A proper estimate of the latter can usually be obtained by urography.

Examining the prostate a second time is almost always revealing; one gains more conviction, plus or minus, as to that fear-some plague in both the minds of patient and surgeon, is the pain from a cancerous source, does that isolated nodule represent abscess or neoplasm? If there is basis for consideration of the latter how to proceed without unduly exciting the suspicion of an already conditioned patient offers intriguing cogitation. If, as some investigators say, as high as 20% of all men with bladder neck obstruction will have cancer what reasonable steps may be taken to settle this responsibility for the patient? Should he be told and his fears greatly accentuated that he might have cancer, or is it legitimate to proceed within ethical bounds but perhaps not safe medicolegal ones to try and establish a correct diagnosis.

Procedures short of biopsy are usually so unrewarding as to be unprofitable to all concerned. Cytologic staining or discharges for cancer cells and chemical examination of the blood, such as phosphatase determinations, have been abandoned by many and are held by some to be of little more than academic interest.

Presuming that the lesion is suspect enough to warrant detailed examination, how should it be done? Should, as some advocate, open perineal exposure be done and biopsy made with provisions for radical perineal extirpation. Or should the surgeon rely on what may be truer biopsy material directly from the nodule located posteriorly or at base and which can only be reached by needle through the perineum or through the rectum by rongeur. By the latter methods malignant cells could be planted in the biopsy channel as the instrument is removed

in spite of destructive electrocoagulation.

Just what is one to recommend to a man under 50 in full sexual vigor with no pain and only a slow stream with occasional nocturia. The problem is complex and fraught with many pitfalls; opinions are varied and one extreme to the other has its adherents. Possibly a good rule is to offer the patient about what you would accept if it were offered to you.

In my series, during the years 1959-1960, there were approximately 6,470 office visits by male patients. There was evidence that in 70%, or 4,529 bladder neck symptoms were present in one form or another. Of this group it was concluded that the problem was sufficient in 153 to carry out surgery which was done. Forty-nine in this group ranged in age from 22 to 50. Also in this group the predominant anatomic lesions in order of frequency were:

- Hypertrophy—more than one lobe
- Contracture—fibromuscular
- Hypertrophy—nodular
- Hypertrophy—median bar
- Carcinoma

All of the cases were dealt with by transurethral resection except in the cases of cancer.

Cancer was suspected in 3 cases and proven. One of these patients refused radical surgery; he was aged 47 and stated that he would rather keep his erections and maintain whatever sexual life was left to him after a transurethral resection to give an adequate channel. The other two, age 42 and 49, accepted the advice to have radical surgery. In one this was done retropublically and in the other by the perineal route. The testicles were left in both.

The patient who refused operation has done better than the other two the gland has not changed greatly, a satisfactory channel has been maintained, and he is happy with normal sexual activity. The two who submitted themselves to radical surgery are totally impotent, one has had a recurrence and the other is incontinent. In the latter the operation was done by the perineal route.

In the 46 cases which represented benign lesions and were relieved by endosurgery the results have been very satisfactory both to the patient and the operator. The most

important improvement has been voiding with a good free stream and control of the infection. From a sexual standpoint 70 patients have stated that they are better than ever in these respects. Twelve have stated that everything is satisfactory except that the amount of the ejaculate has decreased. Fifteen have stated that they have satisfactory desire, erections, and a sense of orgasm but have no ejaculate. Eleven have said there has been no change, and one who was impotent before operation has stated that he was better for a short time afterward but that after 5 weeks the old impotency returned. Following this he improved while away from home but regressed again on return.

Discussions and Conclusions

This subject is not presented as a basis for conclusions but rather as an effort to illustrate a method of caring for a rather common urologic problem. There is nothing original about it. The most rewarding diagnostic maneuver is urethrocystoscopy using

whatever instrument is best adapted to the surgeon.

Preparation of the patient is of prime importance. He should have a full discussion of the urinary and also sexual aspects: i.e., urinary control and changes to be expected in his abnormal function; he should be told there may be sexual changes such as loss of ejaculation and possible sterility. However, here as in other fields of surgery no definite promises should be made. The patient and his nearest kin, particularly his wife, should be given a thorough understanding of the trouble, the method of correction, and the possible results. A much more satisfied patient is one who makes up his own mind to undergo operation and particularly one with the realization that he must share in the responsibility.

Patients with urinary obstruction can gain rewarding relief and become grateful satisfied individuals after an endosurgical procedure to relieve their bladder neck obstruction.

Colorado Troubles: Benefits under Colorado's medical care program for the aged were sharply curtailed after legislature refused to appropriate \$1 million to keep plan out of the red. Constitutional amendment set \$10 million yearly limit on plan for 52,000 pensioners covered. Program faces a fiscal 1961 deficit of \$600,000. (*A.M.A. News.*)

Health Spending: Nearly \$1 billion a year is spent in U.S. on construction of hospitals, nursing homes, other health facilities, Health Insurance Institute reports. Of this amount, 58% comes from private sources, 25% from state and local governments, 17% from federal government. (*A.M.A. News.*)

Surgery Fees

Physicians performed surgery for free or charged greatly reduced rates in 7% of all surgical procedures reported in a survey by Health Information Foundation.

The survey showed that the gross total fee was \$200 or more in 23% of the procedures reported; \$100 to \$199 in 30%; and less than \$100 in 35%. Size of the fee was not determined in 5% of the cases.

Specialists in surgery performed 77% of the operations where the fee was between \$100 and \$199 and 84% of the procedures where the fee was \$200 or more. (*A.M.A. News.*)

CLINICOPATHOLOGIC CONFERENCE

Methodist Hospital, Memphis, Tennessee Diffuse Pulmonary Interstitial Fibrosis (Hamman-Rich)

A 56 year old white married man, transit foreman for a cotton compression and warehouse company, was admitted to this hospital three times over a period of seven and one-half years.

He was first seen here at the age of 48 with an episode of "acute bronchitis"; bronchograms were made and revealed "bronchospastic changes, especially in the lower lobe of the left lung." He apparently responded well to treatment and was followed periodically as an outpatient; 2 years later he was reported doing well on periodic antibiotics and ammonium chloride. He had stopped smoking and had gained about 30 pounds. His only complaint was slight dyspnea on exertion. There was no hemoptysis and no wheezes. Physical examination and fluoroscopy were normal. His vital capacity was 3400 cc.

Four years after first admission, now aged 52, he stated that his general health had remained good, but he was having some chronic cough with production of sputum. Examination in his doctor's office revealed a T. of 99.2°F. with B.P. of 132/88. There was an occasional extrasystole and a systolic murmur at the apex. While no abnormal physical findings were described in the lungs, his vital capacity was now 2900 cc. slow and 2700 cc. fast.

He apparently did well for the next 3 years, then presented himself with a history of "fever, cough, and thick sputum" unimproved by "antibiotics and shots." These symptoms had been present for about a month. He was now having frequent dyspnea, wheezing, and insomnia due to coughing. He had lost no weight. There were now rales in the right base. The vital capacity was 2700. He was admitted to the hospital. T. was 99.3°F. with a P. of 80, R. 20, and B.P. 130/60. Moist rales were described now in both lung fields, especially in the right base. There was a normal sinus rhythm. A systolic murmur was again described, best heard in the second intercostal space at the border of the sternum. Urinalysis was within normal limits. A hematocrit was 42%. Total leukocytes were 10,100 with 73% segmented neutrophils and 27% lymphocytes. Another chest film was reported: "Radiographic findings favor pulmonary congestion. A patchy pneumonitis at the right base cannot be excluded." Bronchoscopy revealed no abnormalities and bronchial washings showed no tumor cells. On the 2nd hospital day he was begun on chloramphenicol; he had previously received penicillin and expectorants. He appeared to improve, although slowly. On the

3rd hospital day, his temperature fell to normal and remained normal. On the 8th day, he was discharged.

Over the next 2 weeks he showed little improvement. He continued coughing and remained in bed most of the time. There was persistent density in the right base with rales and pain not responding well to triacetyloleandomycin, expectorants, and postural drainage.

Because of poor response, he was hospitalized the third time. His T. was now 97.6°F.; physical findings otherwise showed no significant change. Bronchograms on the day following admission were described as showing "... broncholuminal irregularity throughout the right lung consistent with chronic bronchial disease. Similar changes appear to involve the basilar segmental bronchi on the left." Bronchoscopy revealed no tumor; washings were reported "Atypical cells present, probably not tumor." An EKG. was normal.

On the 6th hospital day, resection of the lower lobe of the right lung was performed. There were extensive fibrous pleural adhesions. (Fig. 1-A)

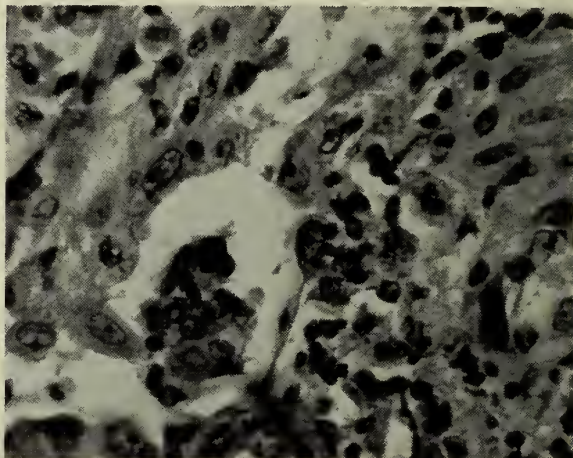


FIG. 1-A. Surgically resected specimen. (S59-9271). Proliferation of alveolar lining cells with slight nuclear atypia (lower left field). A cluster of chronic inflammatory cells lies in the alveolar lumen. Throughout the field, fibroblasts and lymphocytic aggregates are conspicuous.

Many nodules with diameters of 0.2-1.0 cm. were described scattered over all lobes and the lower lobe was particularly nodular. The volume of the lower lobe was estimated as half of normal. The prosector describing the specimen remarked "... moderate dilatation of all bronchi, especially in the subpleural portions. ... All segments show nearly uniform consolidation, the lung parenchyma being composed of firm, yellowish-gray to grayish-white, mottled tissue." (Fig. 1-B) Anatomic diagnoses were: "Bronchiectasis, marked; with involvement of all segments. Focal squamous metaplasia of bronchial epithelium. Chronic pneumonitis. Focal fibrosis of lung. Lymphocytic aggregates in pleura and in wall of bronchus." He was continued on chloramphenicol after operation and appeared to improve over the next week, but then showed temperature elevations in the after-

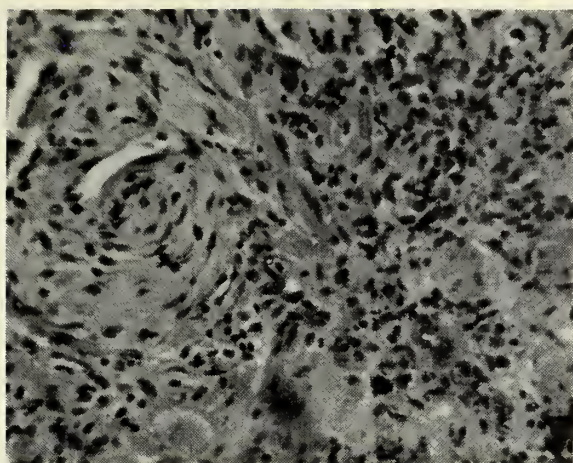


FIG. 1-B. Surgical specimen (S59-9271). Sclerotic pulmonary arteriole in upper left of field. Obliteration of adjacent alveoli by advanced fibrotic process.

noon as high as 102°F., falling in the evening to 99 or 100°F. Chest films were several times reported as revealing "... heavy reticular markings in both lung fields." Many sputum cultures for acid fast bacilli and fungi were unrevealing. *Pseudomonas aeruginosa* and *E. coli* along with gamma hemolytic streptococcus were reported in cultures for pyogens. These were sensitive to many antibiotics. A wide range of antibiotics and sulfadiazine were given, but with no apparent permanent benefit. Rales persisted over the right lung and later appeared over the left lung. His course was complicated by obstructive uropathy, thought to be due to benign hyperplasia of the prostate gland with a distended urinary bladder compressing a pelvic kidney and producing renal colic. This was brought under control. Some 6 weeks after lobectomy, his temperature had fallen, with afternoon elevations of 1°F. or less. It was thought that this might be a response to novobiocin, but he continued producing purulent sputum and remained dyspneic.

On about the 56th postoperative day, he began a strikingly deteriorating course. Fibrotic infiltrates had persisted in both lungs, and there were continuing rales with increasing dyspnea and chest pain. Afternoon temperatures of 102°F. reappeared. On the 59th postoperative day, he suddenly expired.

Discussion

DR. ORIN BUTTRICK: I should like to ask that the x-ray pictures be presented now, please.

DR. HOLLIS HALFORD: I have selected a series of films from this man's folder; the study spans a period of 6 years and 5 months. Films from 1954, 1956, and 1957 show gradually increasing markings, very nonspecific. In 1959 there begins a heavy reticular pat-

tern, with mottled density particularly in the lower lobe of the right lung. Close-up examination of this film reveals very fine nodular densities throughout both lungs. Bronchograms were made at about this same time. Then beginning in December of 1959 and on through the last film in February of 1960, changes in the lungs seem to be progressive, and more prominent; the fine nodules seem to become coalescent. There are areas of reticular strand density, with more fine nodules. The pattern appears on x-ray to be predominantly that of a fibrosing process.

DR. BUTTERICK: We are then confronted with a patient in his sixth decade, who has a history of recurrent respiratory infection over a long period, well controlled and with little apparent progression until the onset of a febrile illness with evidence of a right lower lobe infiltrate about four months prior to his death.

This final illness was one of progressive deterioration, with only brief periods of improvement which were associated—at least in respect to time—with the administration of antibiotics. We are led to believe that this is primary pulmonary disease, or at least disease primarily affecting the lung, by the fact that only brief mention is made of abnormalities and symptoms relative to other organs. First there is the brief description of a changing systolic heart murmur; second is the occurrence of an episode of obstructive urinary tract disease in the postoperative period. The course of this patient's illness up until the time of surgery was not at all unusual: recurrent episodes of acute bronchitis, leading to bronchographically demonstrable chronic bronchial disease, and superimposed bacterial pneumonitis which failed to clear with conservative therapy. The possibility of neoplasm was undoubtedly considered, but the absence of a mass on x-ray and normal findings on bronchoscopy were reassuring. The surgical findings of multiple nodules throughout the right lung is the first indication of the possibility of a more obscure diagnosis. However, the pathologic description is one which would be consistent with the disease process already mentioned. It is only in the complicated postoperative course that the diagnostic problem becomes evident. There is

no indication of a postoperative complication such as empyema or bronchopleural fistula. The possibility of a postoperative pneumonia due to a resistant organism can be ruled out by the culture report of sensitive bacteria. It is therefore concluded that the terminal disease originated prior to surgery, and was either of such non-specific character that tissue findings were not diagnostic, or that changes were sufficiently subtle or rare as to make diagnosis difficult pathologically, as well as clinically. To further compound the problem, this unknown disease may have been of such chronic nature as to have been present over a period of over seven and one-half years; or so acute as to have resulted in death over a period of four months.

Of the bacterial pneumonias, only Friedlander's and staphylococcus pneumonias might be so chronic. Predilection for upper lobe and mid-lung field involvement, as well as cavity formation by the former, and negative culture studies, as regards to both, would tend to eliminate these from consideration. Superinfection of a more common pneumonia by *E. coli* and *Pseudomonas aeruginosa* might well occur, but as these organisms were antibiotic sensitive, response to therapy would be expected. Evidence of terminal bronchopneumonia, however, will undoubtedly be present.

The development of wheezing and particularly of localized wheezing in a patient past the age of forty, should always suggest the possibility of bronchogenic carcinoma. Pneumonia which fails to clear completely following therapy is equally suggestive of pulmonary tumor. We have in this patient not only negative diagnostic studies, but also negative pathologic studies of the right lower lobe. The possibility of alveolar cell carcinoma cannot be discounted quite so easily. This tumor, which is presumed to arise from epithelial cells of the alveolus, frequently presents as a localized lesion on x-ray but may appear with a much more diffuse pattern. The symptoms are predominantly cough, dyspnea, and chest pain. The sputum is typically profuse and watery, but may be purulent when secondary infection occurs. Although asymptomatic early, the course is typically rapid when dyspnea develops, and death is due to diffuse alve-

olar destruction with resulting asphyxia. As lymphatic invasion and distant metastasis are rare, spread is thought to occur by intrabronchial dissemination. Although the pathologic picture is usually quite typical, confusion with bronchial epithelial metaplasia is mentioned in the Armed Forces Fascicle of Tumor Pathology.

The x-rays and clinical picture are compatible with lymphangitic metastases, most commonly seen with carcinoma of the terminal colon and prostate. Although we have evidence of urinary tract disease, this was apparently of brief duration. Investigation of this problem as well as a negative pathologic specimen, makes this an unlikely possibility.

The mention of congestive changes by x-ray always suggests the possibility of underlying cardiac disease, and it is indeed important in any obscure lung disease. The course described is compatible with recurrent embolic phenomena with superimposed infection, even in the absence of an obvious site of origin. However, pathologic study of the resected specimen should have been diagnostic.

Of the granulomatous infections, tuberculosis can be eliminated by negative sputum studies as well as by negative pathologic study. Histoplasmosis and other mycotic diseases, however, are at times cultured with great difficulty and require intensive search pathologically. Results of skin tests and any serologic studies are not available to us. We must assume that diligent search was made, and thereby eliminate specific granulomata from consideration.

Many physical and chemical agents can give the clinical picture presented. The most important diagnostic point in such diseases is the history of exposure requiring direct question as to the use of mineral oil and exposure to specific dusts. The only suggestion given is exposure to dust and lint in cotton compressing. Byssinosis is a disease involving heavy exposure to cotton dust, which is much more likely to occur in a ginner, or in workers in factories handling unbaled cotton. It is an unlikely possibility in this case.

The prolonged, relatively asymptomatic history suggests the possibility of sarcoidosis. Typically, we should expect to see early

enlargement of the hilar nodes, with gradual development over a period of years, of pulmonary infiltrate radiographically. Although secondary infection can confuse the picture, one would ordinarily not expect the marked clinical symptoms accompanying the progressive x-ray changes as in this patient. Although there is some suggestion of hilar adenopathy on the early films, this is certainly minimal. In addition, the pathologist fails to describe the rather typical hard tubercles seen in this disease. Bronchiectasis is seen only rarely in sarcoidosis.

Increasing mention of the pulmonary manifestations of "collagen diseases" has appeared in recent literature. That pleural and pericardial manifestations are common in disseminated lupus erythematosus is well known. But the occurrence of pulmonary parenchymal infiltrate in this, as well as in periarteritis nodosa and in scleroderma, has been less frequently recognized. The absence of multiple system symptoms, especially of renal symptoms, is probably significant. Eosinophilia is absent. However, the pathologic picture in the lungs presents a difficult interpretation, although vascular changes would have been expected. Skin and muscle biopsy, as well as studies for lupus erythematosus cells, might have been of value.

Rare diseases producing pulmonary infiltration which must be considered, are diffuse non-specific pulmonary fibrosis (the Hamman-Rich syndrome), eosinophilic granuloma, plasma cell pneumonia, and alveolar porteinosis. The diagnosis of such disorders involves clinical and x-ray evidence as demonstrated in this patient, but accurate diagnosis depends upon pathologic interpretation of the biopsy specimen. Of these diseases, the Hamman-Rich syndrome most accurately follows the course described for this patient. Pathologically, interstitial fibrosis is prominent, as well as marked hyperplasia of cells lining alveoli and terminal bronchioles. Death results from alveolar-capillary block with progressive dyspnea and usually with marked cyanosis. The patient is particularly prone to recurrent respiratory tract infections. Helpful findings, not mentioned in the protocol, would be the development of cyanosis, electrocardiographic evidence of pulmonary hyperten-

sion, and the development of polycythemia.

Finally, we must consider the possibility of malignant lymphoma. Hodgkin's disease and lymphocytic lymphosarcoma are the two most commonly found involving the lung. Although these usually are present as mass mediastinal lesions, parenchymal involvement does occur. The well known tendency to a febrile course as described here would support such a diagnosis. The absence of evidence of prominent hilar nodes is against such a diagnosis. However, we cannot eliminate this possibility with the information given.

In summary, we have a clinical picture which could be explained by many diseases; one in which final diagnosis would usually be sought by tissue section and cultural study. In the absence of this, my diagnosis can only be given as an opinion. I feel that this patient most probably had chronic bronchitis for many years and developed without association, the Hamman-Rich syndrome, approximately four months prior to his death.

DR. HELEN PRIETO: Thank you Dr. Butterick. This case is open for discussion.

DR. CHARLES B. McCALL: I saw this patient in consultation and remember him well. I shall make only a few comments as little can be added to the thorough discussion by Dr. Butterick. Clinically, I felt that this man showed several things that fit Dr. Butterick's diagnosis. One was his relative lack of physical findings. His lungs were relatively clear. Physical findings were limited to rales on occasion and these varied. Even with forced expiration there was an absence of wheezing which would indicate significant expiratory obstruction. There were no function studies done other than the vital capacity. On one occasion the protocol tells us he had a slow and fast vital capacity and we note that the fast was slightly less than the slow vital capacity. This would tend to indicate some trapping and possible expiratory obstruction, but this is only one determination and it is not marked. When I first saw the patient this was not present on physical examination. This leaves the lung fields virtually free of signs other than a few rales. He was tachypneic at rest and had tachycardia. As I recall, he was not cyanotic at rest initially,

but terminally did become cyanotic. It is of some importance that with the administration of oxygen his tachypnea and tachycardia diminished markedly and his cyanosis cleared. At one point he was quite comfortable at rest but very little exercise caused a marked increase in all these findings as well as his dyspnea. It was because then of the rather characteristic picture of symptoms and x-ray findings out of proportion to physical findings, tachypnea, rather marked worsening with exertion, and good response to oxygen that we felt there was an interstitial pulmonary process resulting in the alveolar-capillary block syndrome. With this in mind we reviewed the tissue sections. I might add that if pulmonary function studies had been available we would have anticipated that they would have shown a decreased lung volume. As we have seen the vital capacity decreased from 3400 to 2600 cc. Characteristically, the maximum breathing capacity would be expected to be normal, or if reduced, not reduced to the same degree as the vital capacity. These patients characteristically hyperventilate at rest. Various partial explanations have been proposed. I have always interpreted the hyperventilation as an attempt to raise the alveolar partial pressure oxygen by lowering the alveolar partial pressure of carbon dioxide. Classically there is then a low blood carbon dioxide and an elevated pH. Recent studies have shown that hyperventilation is in many cases enlarged partly due to an increase in physiologic dead space making alveolar ventilation either normal or increased. If the physiologic dead space is increased carbon dioxide may be normal. If the dead space is near normal, the CO_2 may be decreased at rest. The maximum diffusing capacity is reduced in such patients because not only is there an increased barrier to the diffusion of oxygen from the alveoli to the red cell, but there may also be a decrease in the pulmonary vascular bed. There is little question of the patho-physiologic diagnosis of alveolar-capillary block syndrome. Membrane difficulty (that is, alveolar-capillary block) can be discussed at length, but we need not pursue this further except as it applies to idiopathic pulmonary fibrosis. I think in this case it can well be called

Hamman-Rich syndrome. This can even be applied if we use the original definition of Hamman and Rich describing a disorder characterized by the rather acute onset of a pneumonic episode with a rapid progressive deterioration resulting in death in a relatively short period of time. It has been further enlarged subsequently to include more chronic processes though this man fits the original description of the Hamman-Rich syndrome.

DR. PRIETO: I should like to ask Dr. McCall if he has any detailed information on the manner of death in this case.

DR. MCCALL: No, I was not present at the time of death, although as I recall he did die rather suddenly. He had complained of chest pain, which may have been due to pulmonary hypertension. Terminally, these patients do have pulmonary hypertension. There was nothing to suggest coronary artery disease. Of course an arrhythmia is possible in the presence of severe anoxia.

DR. PRIETO: I asked this question remembering the patient discussed last year; his course terminated in a respiratory death, although he suddenly stopped breathing, the heart beat persisted for some time. In the case under discussion tonight, the clinical impression recorded on the chart was "ventricular fibrillation." As Dr. McCall has pointed out, this may have been a complication of anoxia.

Is there any further discussion? If not, I should like to present the anatomic findings. The diagnosis of diffuse interstitial fibrosis of the lungs was actually made antemortem, but only after the surgical specimen was reviewed with all other pertinent data on hand.

Post mortem examination was limited to thorax. The left lung weighed 900 Gm.; the remaining middle and lower lobes of the right lung weighed 490 Gm. Both showed the changes previously described in the surgically resected specimen, suggestive of a diffuse fibrotic process with obliteration of normal alveolar markings and with some bronchiectasis in all segments. (Fig. 2.) In neither lung, however, was the fibrotic change as marked as in the surgical specimen. The heart weighed 550 Gm. with an enormously thickened right ventricle. There was a nondeforming but moderately calci-

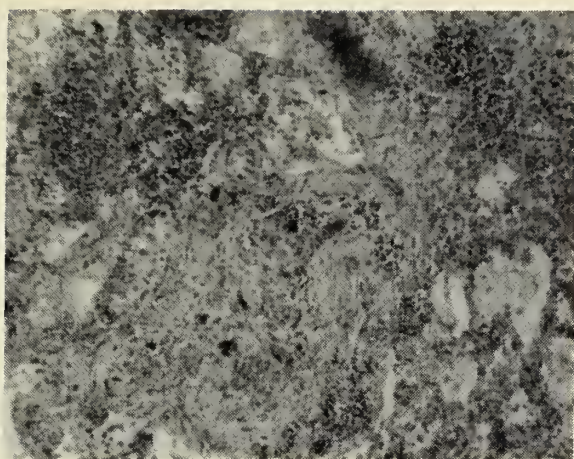


FIG. 2. Autopsy specimen (A60-33). Suppurative bronchopneumonia superimposed upon interstitial fibrosis. Some alveoli are obliterated; the remaining ones contain purulent exudate.

fied endocardial sclerosis of the aortic valve which might account for the systolic murmur described several times during his course. It is not likely that the terminal episode of ventricular fibrillation was on any basis other than a physiologic one; there was virtually no coronary arteriosclerosis and the myocardium was entirely normal. There was, however, a tiny thrombus in one arteriole of the myocardium.

This is the third case of diffuse interstitial fibrosis of the lungs seen in this hospital in the past fourteen months. Our anatomic diagnosis refers to the structural change in the Hamman-Rich syndrome. Peabody and others believe that "diffuse interstitial fibrosis and pneumonitis" is a more appropriate term.

Only a few years ago this was thought to be a very rare entity. As more cases are reported, it appears that it is not so uncommon as supposed. I believe that when it is possible to review postmortem material in this hospital, it will become apparent that some of the cases called "marked pulmonary fibrosis" or "multifocal fibrosis" have actually been involved in the Hamman-Rich syndrome. If clinical and roentgenologic data are available in such cases, we may very well find that we have been seeing several each year.

The history of this entity is worth mentioning. There is not yet evidence that the Russians first discovered it in 1812. It is usually said that Hamman and Rich presented the first cases in 1944. This is not

quite true; their original article, including a summary of 3 cases, first appeared in 1935. Nine years later, in 1944, they presented a more complete and really classical description of clinical, roentgenologic, and anatomic findings. By this time a fourth case had been added to the original three. By 1953, a total of 21 cases could be found in the literature. In 1958 a total of 5 had been recognized on lung biopsy, but again the diagnoses were augmented by clinical information. In 1958 the Czechoslovakians reported 7 cases identified over eight years. Not being able to read Czechoslovakian, I do not know how thoroughly substantiated these are. The others certainly appear to have been placed in the proper category diagnostically. At present, so far as I can determine, the total number of positively proved cases to be found in the literature is well under two hundred. The cases seen in this hospital recently certainly seem to have been accurately called. If this is so, the general incidence should be higher. Whether the syndrome is not being recognized or simply not being reported, I do not know.

The cause of this disease has not been determined. Viruses have been implicated and while it is true that some cases have appeared to follow "viral pneumonia" or "influenza," no substantial evidence has appeared. Inclusion bodies have not been identified. As Dr. Butterick mentioned, some investigators have felt that the alveolar proliferation is suggestive of viral origin, but the same change can be induced with many types of irritant. Dr. Steffee could probably tell you at some length about the various agents which will produce much the same picture in mice. Sensitivity reaction has been suspected, but again there is no definite evidence; some such cases have finally been found to be dermatomyositis, scleroderma, and polyarteritis nodosa. This cannot be called Hamman-Rich syndrome. The possible role of chemical irritants has not been thoroughly explored, but data at present are disappointing. One case has been described in association with prednisolone therapy for hypertension, but a true cause-effect relationship is not apparent.

At one time it was thought that this was

a very acute and fulminating type of disease. More lately, it is thought that there are probably in addition chronic and intermediary forms.

The pathologic anatomy is aptly summarized in the diagnostic term. Assuming that the essential lesion is interstitial fibrous proliferation with ultimate alveolar obliteration, the anatomic appearance of the lung will be in proportion to the stage of the process. In advanced diffuse fibrosis, it is quite easy to predict the gross appearance of the lung. Weight is increased and so is opacity. Moisture of the tissue is usually uniformly decreased, although in some cases some degrees of edema and/or exudation have been conspicuous. In either case, reduction of crepitation necessarily follows the compromise of alveoli. Such lungs have been described by a wide variety of terms, ranging from "cirrhotic" to "livery." The former term suggests nodularity in addition to fibrosis and actually means of course "tawny." To most of us, of course, the term "livery" implies hepatization as originally described in lobar pneumonia. I personally don't like either word.

Microscopically—and this is an important point which has become evident only fairly recently—one may see different stages of fibrosis in contiguous and adjacent fields. In other words, proliferating young fibrous tissue may be found next to old and well established scars. Alveolar proliferation has already been mentioned in the course of discussion; whether these cells are phagocytes or metaplastic alveolar lining cells, I do not think is entirely clear. Whatever their origin, they can appear as very atypical elements in bronchial washings submitted for cytologic examination. All of our cases have had such examinations and in two the findings have been suggestive, but not diagnostic of malignancy. Squamous metaplasia of the terminal bronchioles, which are the structures involved if there is bronchiectasis at all, may also give atypical cytologic findings. Exudate is not usually conspicuous, but superimposed inflammatory reaction can occur. In the case shown tonight, there was a definite bronchopneumonia, which was probably a terminal development. As in the late stage of any fibrous obliterating type of lesion, vas-

cular changes will eventually occur, and patients not dying an early respiratory death develop cor pulmonale.

As mentioned before, it was once thought that the clinical course was invariably acute. At present, courses have ranged from two weeks to nine years, and I might add that in the cases of longer duration, all diagnostic criteria of the Hamman-Rich syndrome appear to be adequately fulfilled.

Symptoms include severe cough, worse at night and producing insomnia which is extremely difficult to manage; it has been observed in some cases that patients often fall unconscious after an episode of severe coughing. Productivity varies with the degree of superimposed or concomitant inflammatory reaction in the lung. Progressive dyspnea is the rule, with increasing despondency. Depression was a prominent feature in tonight's case, and has been in every other case seen in this hospital. Chest pain and cyanosis are usually present sooner or later. Death is usually in respiratory failure or due to cor pulmonale. The roentgenologic findings are variable. Again, diagnosis cannot be made on clinical and x-ray findings alone. Anatomic evidence is essential, then all findings must be considered together. By the same token, a positive diagnosis cannot be made on lung biopsy alone; the clinical and x-ray evidence is needed to supplement.

This disease can mimic, to mention a few, sarcoidosis, histoplasmosis, the other specific granulomas, pneumoconiosis, and carcinomatosis.

I should like to briefly compare the 3 cases seen here between December of 1959 and February of 1961.

1) J. F., a 63 year old white man, complained of increasing dyspnea and dry cough for one year. There had been marked dyspnea and irregular low grade fever for a week prior to admission. Films of the lungs showed "a fine linear fibrotic pattern in the lower two-thirds of each lung . . . suspicious fullness at the right hilus." The course was rapidly progressive, with respiratory death three weeks after the exacerbation of chronic symptoms. Diagnosis was made postmortem.

2) E. W., the 56 year old man discussed tonight, had variable symptoms for more

than seven years, but entered a phase of severe dyspnea about three months before death. Chest films showed "pulmonary congestion (with) heavy reticular markings in both lung fields." Diagnosis was made on a surgically resected lobe.

3) T. D., a 61 year old white woman, complained of dry cough, chest pain, and increasing dyspnea with depression and anxiety of about three months duration. Chest films showed bilateral diffuse infiltrative lung changes, suggestive but not diagnostic, of diffusely metastatic carcinoma. Lung biopsy was performed and diagnosis was confirmed on this basis. This patient was given long term corticosteroid therapy with objective and subjective improvement. She is now still improved 7 months after the onset of symptoms and about 3½ months after beginning of treatment.

Reviewing the literature, I find that from 1953 through 1958, some experiments were carried out with desperately ill patients who were going to die in respiratory distress unless something was done for them. ACTH and cortisone were tried and it was learned that even slight decrease in dosage, once therapy was begun, could prove rapidly fatal. Three such patients died very suddenly, in spite of prompt re-establishment of the original dosage as soon as the untoward effect was apparent. Results of steroid therapy have been usually reported guardedly and with the reservation that antibiotic coverage is essential. If steroid therapy is discontinued or even reduced in very ill patients, the result may be rapid death. But if the diagnosis is made early, treatment may have some use in preventing further damage due to fibrosis. It will not, of course, remove pre-existing fibrous tissue.

Are there any comments on these cases?

DR. MITCHUM: You might recall a case we had seven or eight years ago with Hamman-Rich disease proved by biopsy. He was given steroid therapy and improved clinically, with some resolution of x-ray changes. One year later he developed monocytic leukemia, and evidently died of this.

DR. McCALL: I'd like to make several comments. We should all try to learn from cases. The x-ray appearance of this diffuse reticular process we can see beginning and then progressing. There is no question that this man did have bronchial disease, had an exacerbation of this, responded, and did well until the diffuse process started. This kind of x-ray picture and the *lack* of physical findings, tell you that this has to be an interstitial process. This is not a localized problem, but a diffuse interstitial process. This much is clear, although we are not sure what it is. Dr. Prieto has said that you cannot make this diagnosis from the clinical findings and x-ray, but I would have to point out that the pathologist had a fairly adequate biopsy, namely a whole lobe, and the diagnosis was not made. The point I want to make is not to pick on either the pathologist or the clinician, but to plead that we get them together. We should go look at our own slides, sit down with the pathologist, and put all facts together. This is extremely important.

DR. PRIETO: Dr. McCall, you had anticipated what I wanted to say. I had a lobe of a lung and a requisition with the diagnosis of "bronchiectasis." This man did have bronchiectasis and he had fibrosis, but not vastly different from the fibrosis I have seen in many cases of bronchiectasis of long standing. I had only the lobe and the slides. The clinical history and the films made the difference. You have made your point.

President's Page



WILLIAM O. VAUGHAN,
M.D.

With the many news reports that you have read pertaining to the Regional White House Conference for ten southern states, conducted in Nashville on November 9th and 10th, I should like to report some observations.

Through efforts of your Association and due to the determination of Dr. Thomas F. Frist, Nashville, and the good relations with Governor Buford Ellington, we were able to get physician representation on the panels where medicine's viewpoint could be made known.

The physician panelists were Dr. Joseph W. Johnson, Jr. Chattanooga, Speaker of TSMA's House of Delegates, and Dr. Harmon L. Monroe, Erwin, a past-president and a member of the Board of Trustees. Mr. Tom Hitch, President of the Tennessee Farm Bureau Federation was moderator on one of the panels.

Federal representatives, primarily those from the Health, Education and Welfare Department, presented their case for "federalized medicine," the principal speaker being the Under-Secretary of the U.S. Department of Health, Education and Welfare.

Under the heading "Opportunities for Senior Citizens" there were two panels presented, one dealing with "Health and Welfare" and another with "Living in the Later Years." On the first panel such topics as medical care for senior citizens under social security, community health services, chronic illnesses, hospital construction, and nursing home construction were discussed. On the second panel entitled "Living in the Later Years" were such topics as income and employment, housing, rehabilitation, and programs for veterans.

The conference discussion centered almost entirely around the "need" for such a program and particularly its cost. It was emphatically brought out that to give service to *all* older people regardless of need, does not make any sense whatsoever. The Kerr-Mills Program, presently the law of the land and in effect in Tennessee, is adequate to provide extended services to the needy and the near needy and by giving this program a fair chance, it can do the job required.

It was shown that the social security approach could only mean the progressive adding of services, and, inevitably, the extension of health services to other age groups until it supplants entirely the vigorous and successful system of voluntary and private mechanism for prepayment of health care.

Drs. Johnson and Monroe strongly stated that the direction of social security approach is wrong. To make a start in this direction—no matter how modest such initial steps may be claimed to be—is inevitably to start the nation going down the wrong road. It will first segregate our older citizens as a special class of state wards. It will, secondly, wastefully require tax increases to provide benefits to all other citizens regardless of any real needs. Finally, it will inevitably lead to the elimination of the vigorous and growing voluntary institutions in every community of our nation, institutions that are alike our successful insurance plans, providing evermore adequate protection geared to the individual needs of older citizens.

Certainly, the federal representatives could not return to Washington with much comfort from the results of the Nashville Conference.

President

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Address papers, discussions and scientific matter to R. H.
Kampmeier, M.D., Editor and Secretary, 8210 Vanderbilt
University Hospital, Nashville 12, Tennessee
Address organizational matters to Jack E. Ballentine,
Executive Director, 112 Louise Avenue, Nashville 5, Tenn.

R. H. KAMPMEIER, M.D., Editor and Secretary
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DECEMBER, 1961

EDITORIAL

BEWARE OF GAS

Recently two patients have been seen who demonstrate the fallacy of necessarily relating the source of gaseous indigestion to the gastrointestinal tract. One, a 60 year old man had been diagnosed as having a duodenal ulcer to explain his indigestion. Examination did not confirm this diagnosis but did demonstrate a constant urinary retention of 300 cc. Another man of 65, had been plagued with gas for a year. He had been on many types of antacids even though two gastrointestinal x-ray studies, a gall-bladder series and colon films were all normal. It was evident after examination that he was in chronic congestive heart failure and appropriate therapy resulted in a 35 pound weight loss. During this time urinary retention developed and a transurethral prostatectomy was done without incident. His gas has vanished to his surprise and delight.

With the above experiences of the past two months in mind, two articles have been studied with considerable interest. Brown-ing and Olsen¹ reported on the functional gastrointestinal disorders of pulmonary emphysema. Although peptic ulcer is seen in patients with pulmonary emphysema with undue frequency, the patient with emphysema is more apt to have digestive complaints on a functional basis. Among the 400 patients with emphysema studied, 15 had digestive symptoms of major importance. These digestive complaints were usually referred in the upper abdomen and consisted of distress especially after meals. Bloating and belching were especially troublesome. Raw vegetables, salads, greasy foods, nuts and meats were particularly liable to cause indigestion. Consequently, patients so troubled usually curtail their food intake sharply and undernutrition often follows. A second group complained not so much with indigestion, but rather with epigastric pain. In a third group the main complaint was poor appetite and loss of weight. As a rule there was anxiety relative to the possible presence of malignant disease. In all of the 15 patients complete and detailed gastrointestinal investigative studies were normal. Most of these patients realized that they had emphysema but had only mild respiratory symptoms even though the emphysema was pronounced. Their chief complaint, however, and interest centered in the gastrointestinal tract. There are some mechanical factors which may help to explain some of these symptoms. The depression of the diaphragm leaves a reduced abdominal space and consequently distension can occur more readily. As a consequence of the dyspnea and resultant dysphagia, air swallowing is common and symptoms can follow this artifact. Another factor is the nervousness and tension which frequently exists in patients with emphysema and, therefore, functional gastrointestinal symptoms may follow. Thus, maintaining the nutrition in a patient with emphysema may be a problem. They must be trained to eat slowly, to avoid talking while eating and to guard against air-swallowing. Even more important is the fact that gastrointestinal symptoms may be the first

complaint of a patient who has early or even moderately severe emphysema.

In another field of medicine gastrointestinal symptoms may again be paramount and misleading. Dowd and Ewert² found gastroenterologic complaints as the main problem in 25% of their 64 patients with silent prostatism. In this group there was no realization on the part of the patients that they were not emptying the bladder properly. Actually only 20% of the 64 patients had any urologic difficulties, and these were not calculated to be the primary disorder. The physical examination does not usually reveal a palpable urinary bladder and the prostate is small. The patients are alert and usually not senile or out of touch with reality. The original clue is often the finding of nitrogen retention. This possibility of silent prostatism is quite apt to occur after surgical procedures, especially abdominal-perineal resections. The cause of the bladder neck obstruction may be benign hyperplasia, carcinoma, or fibrous constricture. The average gland removed weighed 36 grams. Accordingly the gland is so small that rectal examination may be misleading. The significant fact is that 25% of the 64 patients with undiagnosed urinary retention were originally investigated for a gastrointestinal explanation for the chief complaint of indigestion.

It goes without saying that there are other major disorders which may cause gaseous indigestion, but cardiac disease, emphysema, and urinary retention as a background, as described above, are worth remembering.

A. W.

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AMA-ERF

It is now ten years since the American Medical Education Foundation (AMEF) was established. Its organization by the American Medical Association was in direct

response to the financial straits in which medical schools found themselves. The costs attending the education of undergraduate medical students had gone into an ascending spiral which could not be passed on to the students as tuition, nor be met entirely by tax funds in the case of state medical schools. Philanthropy which had so magnanimously underwritten medical education and research for decades had contracted proportionately to a trickle as federal income tax and other taxes had milked large personal or family fortunes to relatively small wealth. Some of this money has come back to medical schools in research funds, but has actually contributed little to undergraduate education. Therefore the A.M.A. took it upon itself to collect monies for the purpose of offering financial aid to the schools, in the main from physicians themselves and through activities of varying degree on the part of Women's Auxiliaries. However, both doctors and Auxiliaries have raised some money by appeal to laymen.

Since its beginning the AMEF has raised \$11,320,063 and disbursed to the Nation's Medical Schools \$10,682,388. From 1956-60 the three Tennessee medical schools have received \$197,381. From 1956-61 Tennessee has contributed \$98,688.

In 1957, the A.M.A. established the American Medical Research Foundation (AMRF) for broad purposes, but which included provisions for financial aid to medical schools.

These two active agencies will be consolidated as of January 1, 1962 as the American Medical Association Education and Research Foundation. Thereby it is hoped to expand the program with the intent of increasing the financial assistance to medical schools and other projects of interest to it. The AMA-ERF is searching for funds to support the following: (1) unrestricted financial assistance to medical schools; (2) a medical journalism fellowship program; (3) a research grants program for medical research workers; (4) a study of perinatal mortality and morbidity; and (5) a study of continuing medical education. In addition it hopes for money to help in financing medical scholarships and for loans to medical students, internes and residents. The

Foundation is incorporated as an educational and scientific organization, its Officers and Board of Directors are elected from among the Board of Trustees of the A.M.A.

The AMA-ERF in its recent memorandum requests the continued support of the medical societies, the Woman's Auxiliary, as well as individual physicians as in the past. It is hoped that those in medicine may interest lay and philanthropic organizations and business in the objectives of the Foundation.

As in the past any contributor may designate a specific school to receive his contribution; this choice may now be extended to any other project sponsored by the Foundation.

December is the month this Editorial Page has publicized the AMEF in previous years. It chooses this month again since any contribution to this cause is deductible for income tax purposes. Contributions to the A.M.A. Education and Research Foundation are tax deductible under Section 501(c) (3) of the U. S. Internal Revenue Service Code.

We hope every doctor will remember his Alma Mater which started him off on a good living, or any other medical school, or other specific project planned by the Foundation.

R. H. K.

PROGRAMS AND NEWS OF MEDICAL SOCIETIES

Memphis-Shelby County Medical Society

The monthly meeting of the Society was held on September 5th in the Auditorium of the Institute of Pathology Building of the University of Tennessee College of Medicine. The scientific program was as follows: The Disaster Planning Commission presented—Colonel Arthur Green, M.D.—“Army Reserve Participation and Civil Defense Emergency Hospitals”; and Mr. Roland Gruenewald—“The Effects and Decontamination of Atomic and Chemical Warfare Agents.” Following the scientific program, a filmstrip entitled “Nine Out of Ten” was presented by Dr. Alvin J. Ingram, President-Elect, on behalf of the S.U.N. Campaign.

Knoxville Academy of Medicine

The Society conducted its regular monthly meeting on November 14th in the Academy of Medicine Building. The scientific program consisted of a panel on diabetes mellitus which Dr. James Warden moderated. The panel members were Drs. Bruce Powers, Elton Shouse, Bruce Bellomy and Robert Meadows. The Eye, Ear, Nose and Throat Society of Knoxville presented a few facts to use in screening patients for glaucoma. These were presented by Dr. Reese Patterson.

Greene County Medical Society

The monthly meeting of the Greene County Medical Society was held at the Elks Club on November 7th. The meeting was preceded by a dinner.

Dr. John Wilson introduced the speaker, Dr. John A. Wolaver, Director of the Mental Health Clinic in Knoxville. Dr. Wolaver presented the psychiatric report which was published after interrogation of the surviving Prisoners of War of the Korean conflict, the subject dealing with the methods of brainwashing by the Communist Chinese. Prior to the scientific session, routine business of the society was conducted.

Chattanooga-Hamilton County Medical Society

The Society held its regular meeting in the Interstate Building on November 7th. The scientific program was presented by Drs. Jesse J. Williams, Jr. and John M. Crowell, their subject was “Occult—Carcinoma of Kidney.”

Nashville Academy of Medicine Davidson County Medical Society

The Society's regular monthly meeting was held in the Vanderbilt University Hospital where the meeting was preceded by dinner.

What's ahead for medicine, insofar as federal legislation and third party controls are concerned, and what can you and your colleagues do about it, were questions answered in the address of Dr. Jere Annis, guest speaker from Lakeland, Florida. Dr. Annis' subject was “Socialism and Medicine—Today and Tomorrow.”

In the business session, the Society nominated 1962 officers and delegates.

NASHVILLE REGIONAL

Information program



Joseph W. Johnson, M.D.
"Shoddy social science — shoddy
medical care . . ."



Panel "B" discusses the health problems of senior citizens. Its composition: 4 laymen—2 M.D.s. (1) Dr. Claire Ryder, U.S.P.H.S.—the other a practicing Tennessee physician, Dr. Joseph W. Johnson, Jr.

"They said they came to listen, but they stayed to talk," so the Journal of the St. Louis County Medical Society summed up the St. Louis White House Regional Conference.

At the same time, a similar conference was being held in Nashville for ten southeastern states. Participants of Panel "A", taking up financing health care for senior citizens, were Ivan Nestigen, U. S. Undersecretary of H.E.W.; Arthur E. Hess, M.D., assistant director, H.E.W.; and Claire Ryder, M.D., U. S. Public Health Service. Each espoused the virtues of a medicare program for the elderly financed by social security.



Zach Metz, Kennedy administration official and task force leader for the Nashville conference, "coaches" Ivan Nestigen from behind large box. (Note arrow in photo 2). Metz was quoted in newspaper as saying, "We're not trying to sell anyone anything." Mr. Metz told two TSMA staff members, at a meeting in his office prior to the conference, "This is our show and we're going to run it."



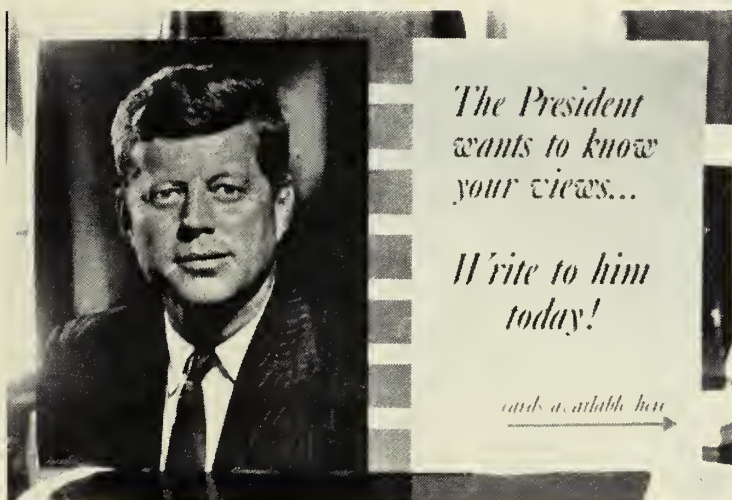
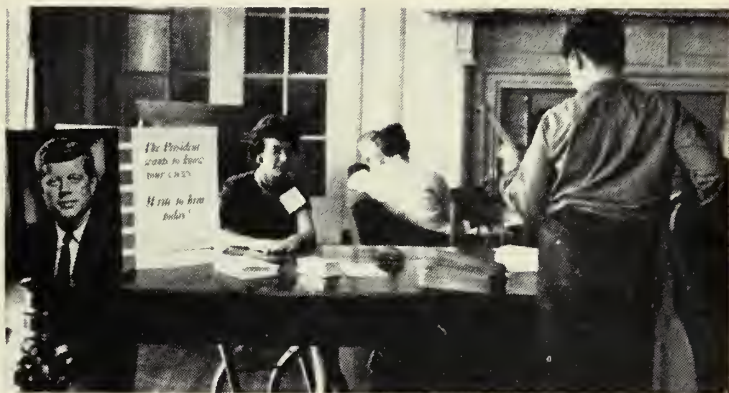
Ivan Nestigen, U. S. Undersecretary, Dept. of Health, Education and Welfare:

"It's (individual need) not in the King Bill. There's no reason for this kind of test—it's not socialized medicine or anything like it."

WHITE HOUSE CONFERENCE

or 'Medicine Show?'

An employee of the U. S. Social Security Office in Nashville distributes "information material" in the lobby of the Peabody College Social-Religious Building. Other U. S. Government employees distributed such material at other panels being held simultaneously, in Nashville. (See photo, right)

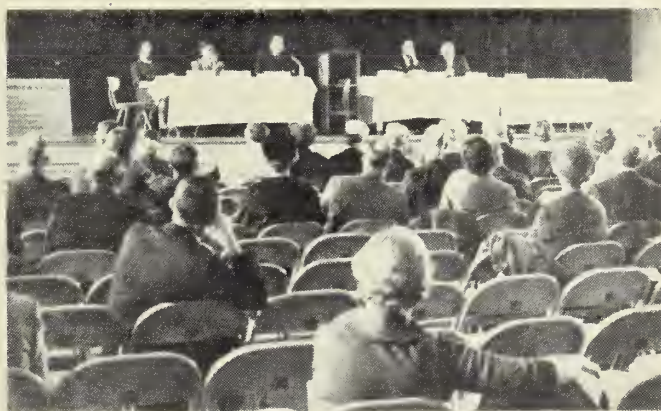


Posters such as this, (Photo, left), and self-addressed postal cards were on hand at each panel discussion.

J. L. Perry, Jr., Nashville, vice-chairman of the G.O.P. in Tennessee, charged that the Kennedy administration was staging a "medicine show" and that the whole affair was strictly "a lobbying effort—at the taxpayer's expense." Perry was joined in his description of the conference by others, including members of the Congress, and newspapers in Tennessee and in other parts of the nation.

Panel "B" at the Peabody Demonstration School, included H. L. Monroe, M.D., Erwin, Tenn., (far, right).

"—All persons over 65 are not sick, broke, or crazy," Dr. Monroe told the fewer than 100 persons attending. (Note empty chairs). This panel, originally scheduled to include income maintenance as a topic, was switched to cover only topics relating to housing.



NATIONAL NEWS

The Month in Washington

(From the Washington Office of AMA)

The Public Health Service said that radioactive fallout levels resulting in the United States up until early November from the new series of Soviet nuclear explosions "do not warrant undue public concern" nor initiation of any special public health action.

The federal agency said that the prevailing levels were not high enough for the public to be concerned about the safety of milk and other foodstuffs.

But PHS added that "continuous, intensive surveillance" by federal, state and local governments was justified.

In a special statement issued after a two-day conference of government and private radiation experts, the PHS pointed out that "very little is known about the effects on animals or humans of very low but prolonged exposures" from either natural background radiation or fallout from nuclear tests.

"The consensus of scientific opinion is that the most prudent course is to assume there is no level of radiation exposure below which one can be absolutely certain that harmful effects may not occur to at least a few individuals when sufficiently large numbers of people are involved," the PHS said. "This is known as the 'non-threshold' concept."

This concept is the basis for U. S. policies and programs for assessment of radiation hazards and for control measures designed to limit exposures of the population, the PHS said and added:

"When this non-threshold concept is applied to present radiation exposure levels being experienced in the U. S. from all sources, including fallout, the following assessment can be made:

"The extra radiation caused by the Soviet tests will add to the risk of genetic effects in succeeding generations, and possibly to the risk of health damage to some people in the United States. It is not possible to determine how extensive these ill effects will be—nor how many people will

be affected. At present radiation levels, and even at somewhat higher levels, the additional risk is slight and very few people will be affected. Nevertheless, if fallout increased substantially, or remained high for a long time, it would become far more important as a potential health hazard in this country and throughout the world.

"It is the obligation of our Federal and State governments to undertake all possible measures to assess accurately the public health significance of the present fallout situation, and to prepare for actions to safeguard the public health if these become necessary."

Federal officials said radioactive fallout on the United States will increase next February, March, April and May when the late winter and spring rains wash to earth the remainder of the fallout from the Soviet nuclear tests but it isn't expected to reach a danger level. President Kennedy said any U. S. nuclear tests in the atmosphere would be designed to hold radioactive fallout to an absolute minimum.

The PHS said that the nation's health authorities are giving careful consideration to the possible situations that might require various corrective actions.

"It is evident that an important element of health protection is continuous surveillance and analysis," the PHS said.

"To achieve this, a number of Federal-State systems for public health surveillance, detailed investigation, and radiation control measures have been developed. . . . In cooperation with State and local health departments, the PHS operates a nationwide early warning atmospheric radiation surveillance network currently comprised of 58 stations, and a 60-station milk radiation monitoring system. In addition, the PHS has well-established networks for general air and water pollution monitoring with a total of 343 stations. All of these include radiation monitoring among their capabilities and all are being expanded. For example, daily samples of drinking water are being collected in 12 major cities and analyzed for specific radioactive content on a weekly basis, and plans are ready for more extensive monitoring if necessary. Rounding out the PHS resources is a system of

highly specialized regional radiological health laboratories.

"The Food and Drug Administration has expanded its program of monitoring the levels of radioactive contamination in foods. Working through 18 District offices and 39 Resident Inspection Stations, its inspectors are sampling foods from all parts of the nation; particularly those areas where the Public Health Service's air monitoring network has indicated the highest concentration of atmospheric contamination. Additionally, FDA collects samples from selected lots of food being imported into the United States.

"These samples are being analyzed for total beta activity and selected samples are further tested to determine what specific radioisotopes are present and in what amount.

"In addition there are the extensive special-purpose radiation surveillance and research facilities of the Atomic Energy Commission and the Departments of Defense, Commerce, and Agriculture.

"All Federal programs and resources work in close concert, and follow the same radiation protection standards, through the coordinating influence of the Federal Radiation Council. . . .

Supplementing these Federal programs and resources is a steadily increasing radiological health capability among State and large city governments. Their programs are usually centered in the departments of public health, with certain special responsibilities often located in other agencies such as State or city departments of public safety. At every level of government, resources and programs are being expanded to cope with the potentially hazardous situation the nation now faces.

MEDICAL NEWS IN TENNESSEE

Average Charges in Hospitals Vary by Area, Services and Size

Hospital patients in a number of states pay a widely varying bed-and-board charge. Average charges in hospitals of the South-South Atlantic states are 35% lower than those in New England.

The great variability of going rates for hospital services was measured by the American Hospital Association in a survey conducted last year and reported recently.

In over 4,400 hospitals the A.H.A. found the following average daily charges for private and semi-private accommodations, including food services, routine nursing care and minor medical and surgical supplies for the East South Central states which include Tennessee, the charges averaged \$15.70 for private rooms and \$12.50 for a two-bed room.

Number of Health Insuring Organizations in Tennessee

The Health Insurance Institute recently announced that in Tennessee, there are 240 insurance companies licensed to sell health insurance. The report also showed that there were two licensed Blue Cross-Blue Shield medical plans and two other plans.

John Sevier Chapter—TAGP

Dr. Tom O'Brien, Bowman-Gray School of Medicine, Winston-Salem, North Carolina, was a recent speaker at the meeting of the John Sevier Chapter of the Tennessee Academy of General Practice. The meeting was conducted at Erwin. Dr. O'Brien's subject was "The Newer Concepts in the Origin of Peptic Ulcers."

Tennessee Academy of General Practice

More than 250 physicians attended the annual meeting of the Academy which was conducted in Nashville, October 25-27. The Society presented its general scientific assembly and business meeting.

Interesting scientific papers were presented, and Dr. Robert H. Elder of Cedar Hill was named Tennessee's General Practitioner of the Year.

One of the highlights of the meeting was the discussion on "Current Legislative Problems," by Dr. Alvin J. Ingram of Memphis.

Dr. John L. Armstrong, Somerville, presided as President and Dr. Harmon L. Monroe, Erwin, presided as Speaker of the Congress of Delegates.

Dr. William A. Hensley of Cookeville was installed as President-Elect.

The program consisted of the following: "Present Status of Vaccine for Polio, Measles and Influenza," by Dr. Randolph

Batson, Nashville; "Differential Diagnosis of Paralysis in Children," by Dr. Robert E. Merrill, Nashville; "Non-Tuberculous Chest Diseases in Children," Dr. Amos Christie, Nashville; "Diarrhea in Children," Dr. A. A. Mintz, Department of Pediatrics, Baylor University, Houston; "Current Legislative Problems," Dr. Milford O. Rouse, Vice Speaker of the House of Delegates, A.M.A.; "Vertigo," Dr. Bertram E. Sproffkin, Nashville; "Recent Considerations of Luetic Infections," Dr. R. H. Kampmeier, Nashville; "Intermittent Claudication," Dr. Fred D. Ownby, Nashville; "Endocrine Control of Renal Function," Dr. James A. Pittman, Medical College of Alabama, Birmingham; "Current Therapy for the Management of Atherosclerosis," Dr. Philip Lisan, Hahnemann Medical College, Philadelphia; "Fundamentals of E.K.G. Interpretation," Dr. Crawford W. Adams; "Emergency Airway (film)," moderated by Dr. Julian K. Welch, Jr., Brownsville; "Diagnosis and Treatment of Varicose Veins," Dr. Walter L. Diveley, Nashville; "The Ingrown Toenail," Dr. Herschel A. Graves, Jr., Nashville; "Management of Lesions of the Gall Bladder and Common Duct," Dr. James A. Kirtley, Jr., Nashville; "External Cardiac Massage (film)," moderated by Dr. William A. Hensley, Jr., Cookeville; "Bleeding in the Last Trimester of Pregnancy," Dr. Frank E. Whitacre, Nashville; "Resuscitation of the Newborn and Apgar Rating," Dr. Edwin L. Williams, Nashville; "Emergencies in the Newborn Period," Dr. Harry C. Shirkey, Medical College of Alabama, Birmingham; and "Surgical Anatomy in Relation to Hysterectomy, Use and Abuse of Hysterectomy," Dr. John C. Burch, Nashville.

The Society elected Dr. Eugene M. Ryan, South Pittsburg, as President-Elect, Dr. John H. Burkhart, Knoxville, vice president, and Dr. Wendell W. Wilson of Old Hickory will serve another term as secretary-treasurer.

The Society voted to hold its 1962 annual convention in Nashville on October 24-26.

Tennessee Diabetes Association

A postgraduate course in diabetes mellitus, its diagnosis and management was held on October 28th at the Maxwell House in

Nashville, sponsored by the Tennessee Diabetes Association.

Instructors included Dr. Fred Goldner, President of TDA and of Nashville; Dr. Irwin B. Eskind, Nashville; Dr. Jean M. Hawkes, Memphis; Dr. Addison B. Scoville, Nashville; Jean McGaw, Nashville; Dr. Albert Weinstein, Nashville; Dr. Charles Sienknecht, Knoxville, and Vice President of TDA; Dr. Erle E. Wilkinson, Nashville; and Dr. Salomon Papper, Professor of Medicine, Medical College of Virginia, Richmond.

TSMA's New Vice President

Dr. Sam H. Hay, Murfreesboro, has been appointed Vice President for Middle Tennessee of the Tennessee State Medical Association. He will complete the unexpired term of Dr. Harvill Hite, Jr., formerly of Pulaski, who has moved out of the state.

Cytology Council Holds Annual Session at Memphis

The Inter-Society Cytology Council held its ninth annual meeting on November 9-11 at the Peabody Hotel in Memphis. Some 400 attended.

Dr. Howard Jones, Jr., chief of the Department of Gynecology at Johns Hopkins Medical School, was chairman of a symposium on a branch of genetics concerning chromosome and gene behavior.

Dr. Cyrus C. Erickson, professor of pathology at UT, is president of the Council. Symposium subjects during the sessions included vaginal cytology of pregnancy, chest cytology and various problems in diagnosis. In addition to Dr. Erickson, Dr. Ben E. Everett, Jr., Department of Obstetrics and Gynecology served on the program committee. Dr. Sidney Coleman, assistant professor of pathology and microbiology was in charge of local arrangements.

Memphis-Shelby County Society Participates in Civil Defense Program

A civil defense emergency hospital was set up at the Mid-South Fairgrounds for public demonstration recently, the showing sponsored by the Memphis and Shelby County Society in cooperation with the Memphis and Shelby County Civil Defense Commission. The exhibition included a 200-bed emergency hospital and it was

shown for a week at the fairgrounds. This was a program of public service and public education.

Career Talks Offered by Memphis Physicians

A "Medical Careers Conference" was held on October 30th for physicians, future physicians, guidance counselors and parents of future physicians at the Institute of Pathology Auditorium in Memphis.

Speakers on the program included Dr. Bland W. Cannon, Medical Society President, and his subject was "The Challenges and Rewards of Medicine." Others participating on the program were Dr. M. K. Callison, Dean, Dr. Alys H. Lipscomb, and Dr. Harwell Wilson, of the Medical College; and Dr. Alvin J. Ingram, president-elect of the Medical Society.

Meharry Medical College Lists Additions to Faculty

Seven additions to the faculty of Meharry Medical College were announced recently. They are: Dr. Lloyd C. Elam, Little Rock, professor and head of the new Department of Psychiatry; Dr. Nihat Atav, Turkey, associate professor of pediatrics; Dr. John B. Hyde, South Dakota, associate professor of anatomy; Dr. Vera McBryde, Dillon, S. C., associate professor, Department of Internal Medicine; Dr. John D. Reese, Berkeley, Calif., associate professor, Department of Pathology; Dr. Thomas E. Shockley, Nashville, associate professor, Department of Microbiology; and Dr. Fred C. Fielder, Hattiesburg, Miss., instructor in operative dentistry.

University of Tennessee College of Medicine

The University of Tennessee College of Medicine is one of 20 southern universities and medical schools which is specifically mentioned in the Southern Regional Education Board for its activities in fields of research.



Dr. M. K. Callison, Dean, reported recently on new developments in the College at an alumni dinner in Dallas, Texas.



Funds made available for research to staff

members of the University's School of Biological Sciences and College of Medicine are increasing at the rate of about \$500,000 a year, Dean M. K. Callison announced. From July 1960, to June 1961, a total of \$971,504 was used for research in the college.



Ten members of the staff of the College of Medicine have been advanced in rank.

In the Division of Pediatrics, Dr. Sheldon B. Korones was promoted from instructor to assistant professor, and Dr. David H. James, Jr., from assistant to instructor.

Dr. John Kier was advanced from instructor to assistant professor and Dr. Murray Fields from assistant to instructor in the Department of Medicine.

Dr. W. F. Mackey was advanced from instructor to assistant professor in obstetrics and gynecology. Promoted from instructors to assistant professors in the department of psychiatry were Drs. Justin Adler and Allen O. Battle.

Dr. Orin D. Butterick, Jr. and Dr. Robert G. Allen were promoted from assistants to instructors in the department of surgery. Dr. Benjamin Greenberg was promoted from instructor to assistant professor in the department of radiology.



A postgraduate seminar on psychopharmacologic agents was held on Nov. 17 in the auditorium of the Pharmacy-Pharmacology Building. Visiting faculty were Dr. Douglas Goldman, clinical director at the Longview State Hospital and assistant clinical professor of psychiatry at the University of Cincinnati, and Dr. Harold E. Himwich, director of research at the Galesburg State Research Hospital, Illinois.



Central State Hospital

On October 31, Dr. O. S. Hauk retired as Superintendent of Central State Hospital, a position he held since 1939, having been an assistant at that hospital since 1933. He received his medical degree from the University of Tennessee School of Medicine in 1910. During his years of the superintendency the size of the hospital and the number of patients given care have more than doubled. Dr. Hauk has been recognized as one of the outstanding administrators of

state mental hospitals and has been publicly recognized in such a role.

Dr. Hauk will continue to serve the people of the State of Tennessee as a consultant in the Department of Corrections in the management of the mentally ill in the prison hospitals of the State.

The position vacated by Dr. Hauk's retirement has been filled by Dr. E. Calvin Moore, who took up these duties on November 1. He had held the position of Assistant Superintendent of the New Jersey Neuropsychiatric Institute at Princeton. Dr. Moore is a native of Texas, a graduate of the University of Texas Medical Branch at Galveston, and received his postgraduate training in psychiatry in Philadelphia.

Southern Medical Association

The Association held its Fifty-fifth Annual Meeting in Dallas, November 6-9. Among the more than 4,000 registrants were 94 Tennessee physicians. Dr. A. H. Lancaster, of Knoxville, continues as one of the Councilors of the Association. Dr. Robert N. Buchanan, Jr., of Nashville, is a member of the Editorial Board, and Dr. R. H. Kampmeier, of Nashville, continues as Editor of the Journal. Among the officers of the twenty-one Sections for the coming year are Dr. I. Frank Tullis, of Memphis, as Chairman of the Section on Medicine; Dr. William Maury of Memphis, as Vice-Chairman of the Section on Obstetrics, and Dr. Benjamin F. Byrd, Jr., of Nashville, as Secretary of the Section on Surgery. Tennessee physicians appearing on the program of the Dallas meeting were: Dr. Harrison J. Shull, Knoxville; Drs. Eugene Spiotta, J. D. Pigott, and R. R. Braund, of Memphis; Drs. Samuel Lambeth and T. L. Flickinger, of Maryville; Drs. Julius L. Goldenberg, Sydney L. Coleman, Jr., Alvin J. Cummins, Nathan Salky, Daniel A. Brody, John W. Evans, Philip M. Lewis, Fred P. Sage, and Joseph E. Salvatore, of Memphis; Drs. Thomas F. Parrish, Sam E. Stephenson, Jr., C. R. Johnson, Robert A. G. Ricketson, Beverly Douglas, of Nashville; Drs. William E. Long, Edward H. Mabry, David S. Carroll, Memphis; Dr. Walter L. Diveley of Nashville.

Officers elected for the Year 1962 were: Dr. A. Clayton McCarty of Louisville—

President; Dr. Fount Richardson, Fayetteville, Arkansas, President-elect (died on November 23); Dr. Robert D. Moreton, Fort Worth, Texas, First Vice President; and Dr. Charles Max Cole, Dallas, Second Vice President.

The Fifty-sixth Annual Meeting will be held in Miami Beach, Florida, on November 12-15, 1962.

Middle Tennessee Medical Association

The One Hundred Thirty-fourth Semi-annual Meeting was held at the Rutherford County Hospital, Murfreesboro, on November 16, under the presidency of Dr. John T. Mason, McMinnville. The program consisted of the following: "Torsion of the Scrotal Contents" by Dr. Tom E. Nesbitt, Nashville; "Recent Advances in the Treatment of Breast Cancer," by Dr. Malcolm Lewis, Nashville; Symposium on "Burns," Dr. Herschel Graves, Jr., Nashville, Moderator, and Doctors Greer Ricketson and Thomas G. Pennington, Nashville and Dr. Joe M. Miller, Donelson, with discussion from the floor opened by Dr. Richard E. Green, Murfreesboro. The Presidential Address opened the afternoon session which was followed by: "Are We Fighting a Battle We Can Win?" by Mr. Jack Ballentine, Executive Director, Tennessee State Medical Association; "The Convulsive Disorder," Dr. John P. Kinnard, Nashville; "Clinical Electroencephalography," Dr. James W. Ward, Nashville; "Pediatric Office Procedures," Dr. Thomas Zerkoff, Jr., Nashville; "Recent Advances in Cardiovascular Surgery," David Dodd, Murfreesboro; "Stabilization of Cervical Spine Following Acute Trauma," Lt. Col. Ernest Lineberger, M.C., Fort Campbell, Kentucky; and "Proper Early Management of Extremity Wounds" by Dr. Richard E. Green, Murfreesboro.

PERSONAL NEWS

Dr. Edwin W. Cocke, Jr., Memphis; **Dr. John M. Higgason**, Chattanooga; **Dr. Victor H. Klein, Jr.**, Knoxville; and **Dr. B. F. Byrd, Jr.**, Nashville, have been elected members at large of the District Board to the Tennessee Division of the American Cancer Society.

Dr. Philip Lewis, Memphis, has been elected to the Executive Committee of the Section on Oph-

thalmology and Otolaryngology of the Southern Medical Association.

Dr. William Hillman, Dr. Robert E. Merrill and Dr. William Meacham, all of Nashville, recently participated in a meeting of the National Foundation Chapters throughout Tennessee.

Dr. W. K. Swann, Knoxville, recently showed a movie of a heart operation to the Knoxville Civilian Club.

Dr. Philip H. Livingston, Chattanooga, discussed "Heart Disease and the Woman" on a Chattanooga TV program.

Dr. Joseph B. McMillon, Ashland City has been elected Medical Examiner for Cheatham County.

Dr. J. S. Lambert, Fairburn, Georgia, has opened his offices for general practice in Waynesboro.

Dr. Julian M. Yood, formerly of New York City, announces his association for the medical and surgical treatment of diseases of the eye, ear, nose and throat with **Dr. Harold Alper** in Chattanooga.

Dr. John H. Burkhart, Knoxville, has been re-elected to another term on the Knoxville School Board.

Dr. Burt Friedman, Memphis, has been elected President of the Memphis Thoracic Society for 1962. Elected to serve with Dr. Friedman were **Dr. Wilfong Gragg, Jr.** vice president, and **Dr. William G. White**, secretary-treasurer.

Dr. Sidney L. Wallace, Knoxville, has been named chairman of the board of the Knoxville Palsy Center.

Dr. George K. Henshall, Chattanooga, spoke on the subject "Current Legislation and What It Means to Us" at the monthly meeting of the Woman's Auxiliary to the Hamilton County Medical Society.

Dr. Robert T. Elder, Cedar Hill, has been named "Tennessee General Practitioner of the Year." He was elected by the Tennessee Academy of General Practice at their annual meeting in Nashville.

Dr. Alvin J. Ingram, Memphis, addressed the recent convention of the Tennessee Academy of General Practice in Nashville.

Dr. William A. Hensley, Cookeville, was installed as president of the Tennessee Academy of General Practice.

Dr. R. H. Kampmeier, Nashville, served on the student representatives committee for the Southern Medical Association's recent annual meeting.

Three Nashville physicians, **Drs. Bruce Sinclair-Smith, John Foster and Andrew Dale** appeared on the program at the 37th annual meeting of the American Heart Association at Miami Beach, Florida. **Dr. Elliot V. Newman**, Nashville, presided over one of the sessions in clinical cardiology.

Dr. James M. Hays, Chattanooga, has opened an office at 104 Interstate Building.

Dr. W. G. Rhea, Paris, received an award at Vanderbilt University recently for his outstanding service in this area to Vanderbilt.

Dr. Henry Packer, Memphis, has been appointed a special consultant to the Sight and Hearing

Branch of the Division of Chronic Diseases, U.S. Public Health Service.

Dr. Richard O. Cannon, Nashville, has been appointed to serve a three-year term on the American Hospital Association's Council on Blue Cross, Financing and Prepayment.

Dr. Addison B. Scoville, Nashville, is the Chairman of a special study committee for a children's hospital.

Dr. J. J. Ashby, Nashville, was presented a tribute for his years of service to the Nashville Junior League Crippled Children's Home.

Dr. G. T. Proctor, Maryville, recently addressed the Athens Kiwanis Club.

Dr. George B. Wyatt, Jackson, recently addressed the Exchange Club members.

Dr. Travis Morgan, Knoxville, was guest speaker for the Medical Assistants' Society of Tennessee.

Dr. Kenneth L. Roark, Johnson City, has been elected a Fellow of the American Academy of Pediatrics.

Dr. E. L. Caudill, Jr., Elizabethton, has been elected county medical examiner for Carter County.

Dr. Reece B. DeBerry, Savannah, recently addressed the Savannah North Elementary PTA on the subject of "contagious diseases."

Dr. Frank Genella, Jr., Oak Ridge, is Chairman of the professional group for the Anderson County Community Chest Red Cross Unit Fund Drive.

Memphis physicians recently elected Fellows of the American Academy of Pediatrics are: **Drs. James S. Brown, John A. Harbinson, Robert G. Allen and Earle L. Wrenn, Jr.**

Dr. Mary Johnson Ward, Humboldt, has been elected a Fellow of the American Academy of Pediatrics.

Dr. Wm. G. Crook, Jackson, was a speaker before the 15th annual assembly of the Louisiana Academy of General Practice.

Dr. John Outland, Somerville, announces that construction will begin shortly on a new 20-room hospital and clinic in Collierville.

The following physicians were recently elected Fellows of the American College of Surgeons. They are: **Dr. Ambrose M. Langa**, Columbia; **Drs. George N. Austin, George W. Bounds, Jr., John H. Foster, Thomas F. Parrish, Robert N. Sadler and John L. Sawyers**, all of Nashville.

Chattanooga physicians recently appearing on television programs in that city were **Dr. Cecil Newell** who discussed "Recent Advances in Surgery"; **Dr. H. D. Hickey** who spoke on "The Role of a General Practitioner in Modern Medicine"; and **Drs. F. J. Smiley, J. H. Stickley and Gordon Hixson** who discussed "Early Cervical Cancer Diagnosis and Management."

Dr. Lynch D. Bennett, Nashville, announces the removal of his office to the Mid-State Medical Center.

Dr. R. H. Kampmeier, Nashville, gave a lecture as guest of the Welborn Clinic, Evansville, Ind., on November 21.

Dr. Wallace H. Hall, Jr., Nashville, announced

his association with the Miller Clinic for the practice of internal medicine.

Dr. William J. Darby, Nashville, head of the Department of Biochemistry, Vanderbilt, has been appointed as one of sixteen members to a National Committee to Advise the Food and Drug Administration regarding the necessity of protecting the public from harmful foods, drugs, cosmetics, and therapeutic devices.

BOOK REVIEW

Pathology. By W. A. D. Anderson, M.D., Professor of Pathology and Chairman of the Department of Pathology, University of Miami School of Medicine. Fourth edition, 1367 pages, 1385 illustrations. St. Louis: The C. V. Mosby Co., 1961. Price \$18.00.

In his 4th edition, Anderson has maintained his tradition of bringing together under one cover more than the usual material covered by other standard textbooks of Pathology and at the same time has provided a rather thorough coverage of the individual subjects. The text, as in the past, is a bit lengthy and the medical student introduced to the material for the first time may experience some difficulty covering the subject material. However, he will less frequently need to consult other texts for the information he needs or would like to have. If he needs additional information, this text has a profuse bibliography which is up to date and listed in a readily useable fashion.

Almost all parts of Anderson's text have received extensive revision. The chapter on "Rickettsial and Viral Diseases" particularly, has been improved upon and the bibliography is now up to date. The chapter on the liver has been rewritten with the help of a co-author. In this chapter, the embryologic development and functional anatomy have been emphasized. The entire chapter has been revised and in general is much improved. Two new chapters "Hypersensitivity Diseases" and "Mesenchymal Tumors" have been added. In the chapter on "Hypersensitivity Diseases," the basic concepts of antigen-antibody "hyper-" responses have been presented. From this beginning the author points out the relationship between "hypersensitive" responses and the collagen diseases—all in all a very interesting chapter. The chapter on "Mesenchymal Tumors," though relatively short, covers well the various tumors for a text this size. If the chapter serves no other purpose it at least affords an outline to follow whereby the heretofore "difficult" soft tissue tumors can be classified. This edition includes the more recently described clinical syndromes, i.e., aldosteronism (Conn's Syndrome), familial chronic idiopathic jaundice (Dubin-Sprinz disease), carcinoid syndrome and others. Two chapters have been omitted. They are "General Principles of Infection and Resistance" and "Heredity

and Constitution in Disease." This is not to imply these topics are not discussed in the new edition. Both are covered briefly but adequately in the chapter "Bacterial Diseases."

All in all, Anderson's 4th edition is an excellent textbook of Pathology and is to be highly recommended.

ANNOUNCEMENTS

The Mid-South Postgraduate Medical Assembly Peabody Hotel—Memphis, Tennessee February 13, 14, 15, 16, 1962

The 73rd annual meeting of the Mid-South Postgraduate Medical Assembly will be held in Memphis, Tennessee at the Peabody Hotel on February 13-16, 1962. Guest speakers and their topics will be:

Robert H. Kennedy, M.D., New York, Director of the Field Program, Committee on Trauma of the American College of Surgeons—"Improving the Care in Emergency Rooms"

Robert B. Greenblatt, M.D., Augusta, Georgia, Professor of Endocrinology, Medical College of Georgia—(1) "The Hormonal Management of Endometriosis" and (2) "Anti-Ovulatory Agents in the Treatment of Dysmenorrhea, Mittelschmerz, and as a Contraceptive"

Benjamin R. Gendel, M.D., Atlanta, Professor of Medicine, Emory University School of Medicine—(1) "Medical Genetics" and (2) "Aplastic Anemia"

L. E. January, M.D., Iowa City, Professor of Medicine, College of Medicine, State University of Iowa—(1) "The Treatment of Severe Myocardial Infarction" and (2) "A Review of the Therapy for Cardiac Failure"

Edward H. Reinhard, M.D., St. Louis, Professor of Medicine, Washington University, School of Medicine—(1) "Active Histoplasmosis in Adults" and (2) "Present Status of Chemotherapy of Cancer"

Ralph W. Gause, M.D., New York, Associate Professor, Clinical and Gynecological—Cornell Medical School—(1) "Obstetrical Emergencies" and (2) "Differential Diagnosis of Abnormal Uterine Bleeding"

John W. Henderson, M.D., Rochester, Minnesota, Associate Professor of Ophthalmology, Mayo Foundation, University of Minnesota Graduate School—"Hemangiomas of Infancy: Eyelids and Orbit"

Bruce Proctor, M.D., Detroit, Associate Clinical Professor of Otolaryngology, Wayne State University—"Deafness in General Practice"

E. E. Muirhead, M.D., Detroit, Director of Laboratories at Woman's Hospital and Professor of Pathology, Wayne University Medical School—(1) CPC and (2) "Hemolytic Anemias"

Joseph A. Johnston, M.D., Detroit, Pediatrician—

in-Chief, Henry Ford Hospital—(1) "The Tonsil and Adenoid Problem" and (2) "The Adolescent"

John Cyril Peterson, M.D., Milwaukee, Professor and Chairman, Department of Pediatrics, Marquette University—(1) "Streptococciosis" and (2) "Immunizations in Infancy and Childhood"

Mr. Harley J. McNeal, Cleveland, Ohio, Attorney-at-Law—"Patients, Litigation and Patience"

Benjamin Felson, M.D., Cincinnati, Professor and Director of Radiology, University of Cincinnati—(1) "Some Fundamentals of Chest Roentgenology" and (2) "Some Fundamentals of Roentgen Diagnosis of the Acute Abdomen"

George G. Finney, M.D., Baltimore, Associate Professor of Surgery, Johns Hopkins University—(1) "CPC" and (2) "Carcinoma of the Gall Bladder" and (3) "Surgical Indications for Splenectomy"

John T. Reynolds, M.D., Chicago, Clinical Professor of Surgery, Illinois College of Medicine—(1) "Inguinal Hernias: The Need for Flexibility in the Technique of Repair, Depending Upon the Anatomical Findings Encountered" and (2) "The Cause of Persistent Symptoms Following Biliary Tract Surgery and the Rationale of Their Treatment" and (3) Special Movie—"Resection of the Right Lobe of the Liver"

Paul C. Bucy, M.D., Chicago, Professor of Surgery, Northwestern University, and Past President of the Society of Neurological Surgeons—(1) "Tumors of the Spinal Cord" and (2) "Tumors of the Brain"

G. W. N. Eggers, M.D., Galveston, Professor of Orthopaedic Surgery, Orthopaedic Surgeon-in-Chief Medical Branch Hospital, University of Texas—(1) "Fractures of the Forearm" and (2) "Fractures in Children"

Walter W. Fischer, M.D., New York, Associate Professor Clinical Surgery, New York University—(1) "Emergency Thoracic Surgery in In-

fancy" and (2) "Indications for Treatment of Diaphragmatic Hernia"

Reed M. Nesbit, M.D., Ann Arbor, Professor in charge of Urology, University Hospital—(1) "Renal Hypertension—Diagnostic Criteria and Methods of Treatment" and (2) "Surgical Aspects of Adrenal Disease."

The above speakers represent the specialties of Endocrinology, Internal Medicine, Obstetrics, Ophthalmology, Otolaryngology, Pathology, Pediatrics, Radiology, Urology, General Surgery, Neurosurgery and Orthopaedic Surgery.

Eighty-five technical exhibits will be displayed and there is planned entertainment for visiting wives.

For additional information, contact Mr. Les Adams, Executive Secretary, Memphis-Shelby County Medical Society, 774 Adams Avenue, Memphis, Tennessee.

Postgraduate Course in Orthopedics at Vanderbilt University School of Medicine

The Orthopedic Surgery Division is offering a Postgraduate Day on Thursday, January 18, 1962, to be held at Vanderbilt University Hospital, beginning at 9 a.m. The subjects to be discussed will include the disorders of the musculoskeletal system which are suitable for office type treatment. The approach will be on a regional basis with detailed discussions of the problems of backache, bursitis, painful feet, cervical and arm pain and osteoarthritis of the weight bearing joints. The indications and contra-indications for the use of steroids will be described. The rationale for the use of physical therapy modalities will be included.

The Course is approved for Category I credit by the American Academy of General Practice. Tuition is \$15.00 which includes the luncheon. For further information address the Department of Postgraduate Instruction, Vanderbilt University School of Medicine.

1961 MEMBERS OF TENNESSEE STATE MEDICAL ASSOCIATION

The list of members of the Tennessee State Medical Association is published in compliance with a provision of the Constitution and By-Laws. The data are accurate as of December 10, 1961. They are arranged in the following order:

List of active members.

Counties arranged alphabetically.

Towns in each county arranged alphabetically and the members in each town arranged alphabetically.

List of members residing outside the state arranged alphabetically.

List of veteran members.

List of members who have died in the year 1961.

ANDERSON COUNTY <i>Clinton</i> A. W. Bishop (Mbr. Roane Co.) P. M. Dings (Mbr. Roane Co. Soc.) J. S. Hall (Mbr. Roane Co. Soc.) Henry Hedden, Jr. (Mbr. Roane Co. Soc.) John J. Smith	Norman A. Mc- Kinnon, Jr. J. F. Manning James H. Millard, Jr. L. Q. Myers Robert D. Mynatt Tom Proctor James N. Proffitt B. P. Ramsey O. L. Simpson, Jr. Trent Vandergriff Lowell E. Vinsant John A. Yarborough	Trezevant James H. Robertson	Donathan Ivey H. F. Lawson Robert M. Metcalfe Stuart P. Seaton M. M. Young	John M. Boylin H. B. Brackin H. B. Brackin, Jr. Cloyce F. Bradley G. Hearn Bradley David V. Bradley James M. Brakelield T. F. Bridges Dorothy L. Brown M. F. Brown (Mbr. Lincoln Co.) J. Thomas Bryan John C. Burch Joseph G. Burd R. N. Buchanan, Jr. George Burrus Swan Burriss B. F. Byrd, Jr. James J. Callaway Richard O. Cannon Joe M. Capps George K. Carpenter Oscar W. Carter Norman M. Cassell W. R. Cate John S. Cayce Lee F. Cayce Robert L. Chalfant Eric M. Chazen Abraham P. Cheij Amos Christie Jeannine A. Classen Everett M. Clayton, Jr. Cully A. Cobb, Jr. Henry A. Cohen John H. Coles, III Harold A. Collins W. J. Core Orrie A. Couch, Jr. Sam C. Cowan, Jr. Frederic E. Cowden Geo. Boyd Crafton H. James Crecraft R. R. Crowe E. Perry Crump W. Andrew Dale Rollin A. Daniel, Jr. Wm. J. Darby Phillip V. Daugherty T. W. Davis Thomas C. Delvaux, Jr. Wm. A. Demonbreun Walter L. Divelev Wm. M. Doak Wm. D. Donald Earl D. Dorris Robert T. Doster Beverly Douglas H. L. Douglass L. Rowe Driver Ray L. Duhuisson Price H. Duff George E. Duncan Herbert Duncan Wm. H. Edwards Paul Elcan, D.D.S. Phillip C. Elliott James W. Ellis Irwin B. Eskind Harry M. Estes E. Wm. Ewers Don L. Eyler John L. Farringer, Jr. W. B. Farris R. O. Fessey Jacob N. Fidelholtz John P. Fields Robert M. Finks John M. Flexner Robert M. Foote Howard R. Foreman Garth E. Fort John H. Foster S. Benjamin Fowler Richard France Horace M. Frazier John W. Frazier, Jr. Thomas F. Frist James L. Fuqua	Robert K. Galloway Chas. K. Gardner James C. Gardner Sam Y. Garrett R. S. Gass Hamilton V. Gayden Horace C. Gayden Charles M. Gill J. P. Glover, Jr. John R. Glover Fred Goldner, Jr. James E. Goldsberry David K. Gotwald Burton P. Grant Geo. T. Graves, Jr. Herschel A. Graves, Jr. Paul A. Green, Jr. Clifton E. Greer, Jr. John W. Griffith, Jr. John H. Griscorn Thos. W. Grizzard Laurence A. Gross- man Milton Grossman Wm. E. Gupton, Jr. Arnold Haber, Jr. David W. Hailey Chas. E. Haines, Jr. Wallace H. Hall, Jr. Thos. B. Haltom Chas. M. Hamilton J. R. Hamilton W. M. Hamilton Roy C. Hammonds Axel C. Hansen Anderson P. Harris Jackson Harris Robt. C. Hartmann A. B. Harwell James T. Hayes John H. L. Heintzel- man James B. Helme J. L. Herrington, Jr. John G. Herzfeld B. K. Hibbett, III J. B. Hibbitts, Jr. William Higginson Elmore Hill, D.M.D. I. R. Hillard John W. Hillman R. H. Hirsch (Mbr. Robertson Co.) J. Harvill Hite Charlie Joe Hobdy Geo. W. Holcomb Jr. A. N. Hollabaugh, Jr. Chas. F. Hollabaugh J. E. Howard (Mbr. Hamblen Co.) W. W. Hubbard James M. Hudgins Granville W. Hudson Vernon Hutton, Jr. Maurice Hyman M. D. Ingram, Jr. Albert P. Isenhour, Jr. J. McK. Ivie W. F. B. James John A. Jarrell, Jr. D. J. Jolins Alfonso P. Johnson Hollis E. Johnson Ira T. Johnson, Jr. Edmund P. Jones T. M. Jordan Orrin L. Jones, Jr. R. H. Kampmeier Herman J. Kaplan A. E. Keller J. Allen Kennedy Wm. G. Kennon, Jr. Joe B. Killebrew (Mbr. Hamilton Co.) John P. Kinnard Lowry D. Kirby
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<i>Norris</i> S. G. McNeeley	<i>Cleveland</i> D. N. Arnold Marvin R. Batchelor Robert H. Bossert Chalmers Chastain, Jr. Jack R. Free Wm. A. Garrett C. S. Heron Ivan C. Humphries, Jr. Frank K. Jones, Jr. C. H. Kimball J. C. Lowe Joseph McCoin Hays Mitchell Allan W. Percepeliza E. Harris Pierce Wm. I. Proffitt John A. Rogness Wm. R. Smith C. T. Speck, Jr. W. C. Stanberry S. J. Sullivan Claud H. Taylor Madison S. Trewhitt Gilbert A. Varnell	CHESTER COUNTY <i>Henderson</i> Darrell King O. M. McCallum R. L. Wilson	DAVIDSON COUNTY <i>Donelson</i> E. E. Anderson Luther A. Beazley Robert B. Gaston C. N. Gessler Chas. H. Huddleston Joseph E. Hurt Joe M. Miller James B. Millis Luther E. Smith Wm. B. Wadlington		
<i>Oliver Springs</i> F. O. Stone S. J. Van Hook	BRADLEY COUNTY <i>Calhoun</i> I. M. Weir	CHESTER COUNTY <i>Henderson</i> Darrell King O. M. McCallum R. L. Wilson	DAVIDSON COUNTY <i>Donelson</i> E. E. Anderson Luther A. Beazley Robert B. Gaston C. N. Gessler Chas. H. Huddleston Joseph E. Hurt Joe M. Miller James B. Millis Luther E. Smith Wm. B. Wadlington		
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E. M. Edington
Edward W. Ellis
J. B. Ely
Frank A. Faulkner
Mark P. Fecher
George H. Finer
J. Marsh Frere, Jr.
Fred M. Furr
Wm. F. Gallivan
Jos. C. Gambill
Frank B. Gaylon, Jr.
Joseph I. Garcia, Jr.
Wm. H. Gardner
George L. Gee, Jr.
Robert H. Gentry
J. Vivian Gibbs
Carl E. Gibson
Robt. B. Gilbertson
Abner M. Glover
McChesney Goodall
Edgar L. Grubb
Glenn D. Grubb
T. F. Haase, Jr.
J. R. Hamilton, Jr.
Walter S. E. Hardy
James P. Harmon
David N. Hawkins
Eugene L. Haun
Louis A. Haun
J. T. J. Hayes, Jr.
M. L. Hefley
N. A. Henderson
George G. Henson
Zelma L. Herndon
Howard K. Hicks
Hubert C. Hill
John R. Hill
Oliver W. Hill, Jr.
Victor Hill
R. L. Hobart, Jr.
David F. Hoey
Leon C. Hoskins
George Turner
Howard, Jr.
Moses W. Howard
Fred E. Hufstedler
Perry M. Huggin
Charles C. Hutson
E. C. Idol
Geo. L. Inge
C. E. Irwin
Harry H. Jenkins
Francis S. Jones
Paul L. Jourdan
Margaret E. Joyce
William M. Keeling
H. M. Kelso
A. Glenn Kennedy
John O. Kennedy
John E. Kesterson
Victor H. Klein, Jr.
Lamar L. Knight
Willis F. Kraemer
A. Hobart Lancaster

Robert F. Lash
William M. Law
F. K. Lawson
Robert P. Layman
Robert S. Leach
Walter J. Lee, Jr.
R. J. Leffler
John H. Leshner
Robert A. Lewis
Felix G. Line
Eugene B. Linton
Thomas L. Lomas-

ney
Frank London
Henry H. Long
Geo. S. Mahon
Margaret Maynard
Bruce R. Mc-

Campbell
Roy C. McCrary
A. R. McCullough
M. D. McCullough
Robert W. Meadows
Alfred F. Miller
Edwin E. Miller
Foy B. Mitchell
John F. Mohr
Ralph H. Monger
J. L. Montgomery
John D. Moore
Owen D. Moore
Travis Morgan
Joel C. Morris
I. F. Morrow
James E. Moseley
Arthur J. Muller
G. E. Murray
William S. Muse
J. B. Naive
Carl A. Nelson, Jr.
William A. Nelson
H. L. Neuensch-

wander
Robert W. Newman
Eugene P. Niceley
Hazel M. Nichols
Ralph G. Nichols
G. T. Novinger
Elvin B. Noxon
Kenneth A.
O'Connor
Ben C. Ogle
Homer C. Ogle
B. M. Overholt
Nicholas D. Pappas
Reece W. Patterson,
Jr.
Robert F. Patterson,
Jr.

Wm. L. Patterson
Charles G. Peagler
E. Converse Peirce
Herschel Penn
Jarrell Penn
H. Dewey Peters
B. F. Peterson
Ira S. Pierce
Cecil E. Pitard
W. W. Potter
William F. Powell
Bruce R. Powers
Wilson W. Powers
H. Hammond
Pride
Thomas C. Prince,
Jr.

James C. Prose
John A. Range
Joe L. Raulston
Freeman L. Rawson
W. Gilmer Reed
Wm. H. Reeder
Paul D. Richards
N. G. Riggins
Frank T. Rogers
Wm. K. Rogers
Kenneth B. Rule
Richard C. Sexton
J. H. Saffold
Wm. A. Shelton
Alex B. Shipley
Elton E. Shouse, Jr.
Kenneth Shoemaker
E. Chas. Siemknecht
Frank J. Siemons
Chas. C. Smeltzer
E. B. Smith
Joe T. Smith
Vernon I. Smith
W. E. Smith
John R. Smoot
James L. Southworth
J. Hooper Stiles, Jr.
I. M. Stockman
Thos. F. Stevens
Wm. K. Swann, Jr.
E. L. Tauxe

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Frank J. Siemons
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Robert F. Patterson,
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D. R. Thomas
Philip C. Thomas
Wm. M. Tipton
Lucian W. Trent
Geo. M. Trotter
M. Frank Turney
Norma B. Walker
Sidney L. Wallace
C. L. Walton
R. G. Waterhouse
David H. Waterman
Alvin J. Weber, Jr.
Roy A. Wedekind,
Jr.

Arthur W. Welling
Fred West
Herbert F. White
Roger E. White
Robert B. Whittle
Richter H. Wiggall
Richard B.

Willingham
Lee L. Williams
M. L. Williams
G. A. Williamson,
Jr.
Perry J. Williamson
Leon J. Willien
J. D. Winebrenner
John H. Wolaver
R. B. Wood
James P. Worden
O. Horace Yarberry,
Jr.

Vincent T. Young
Eugene G. Zachary
Charles R. Zirkle
George A. Zirkle,
Jr.

Mascot
John C. Adler
Hubert Howard
Vesser, Jr.

Powell Station
L. F. Cruze

LAKE COUNTY
Ridgely

W. B. Acree
Tiptonville

J. R. Holefield
W. T. Rainey
E. B. Smythe

*LAUDERDALE
COUNTY*
Halls

J. T. Elmore
J. G. Olds
(Mbr. Northwest
Tenn. Academy)

Ripley
A. J. Butler, Jr.
J. L. Dunavant
James Howard
Ragsdale
Landrum S. Tucker
P. W. Walker, Jr.
Claude R. Webb

*LAWRENCE
COUNTY*
Lawrenceburg

V. H. Crowder
W. O. Crowder
J. W. Danley
Boyd P. Davidson
L. B. Molloy
V. L. Parrish
Carson E. Taylor

Loretto
Ray E. Methvin
M. H. Weathers

LEWIS COUNTY
Hohenwald

David E. Rutledge

*LINCOLN
COUNTY*
Fayetteville

Anne U. Bolner
L. M. Donaldson
Freeman C. Hays
William D. Jones
Ben H. Marshall

R. E. McCown
J. V. McRady
T. A. Patrick, Jr.
C. D. Toone
Paul E. Whittemore

LOUDON COUNTY

Lenoir City

Harold D. Freedman
(Mbr. Knox Co.)
Walter C. Shea, Jr.
R. V. Taylor
(Mbr. Knox Co.)

Loudon

Corrie Blair
(Mbr. Knox Co.)
Samuel A. Harrison
(Mbr. Knox Co.)
W. B. Harrison
(Mbr. Knox Co.)
Wm. T. McPeake
(Mbr. Knox Co.)
J. R. Watkins
(Mbr. Knox Co.)

MACON COUNTY

Lafayette

C. C. Chitwood, Jr.
E. M. Froedige
James D. Lane
Max E. Painter

MADISON COUNTY

Bemis

Kelly Smythe
Allen N. Williams,
Jr.

Jackson

Harold K. Alsbrook
J. G. Anderson
Thomas K. Ballard
R. J. Barnett
G. H. Berryhill
Jack H. Booth
Wm. H. Brooks
Swan Burrus
Swan Burrus, Jr.
Hughes Chandler
Wm. G. Crook
G. B. Dodson, Jr.
J. E. Douglass
Roy A. Douglass, Jr.
Clarence Driver
E. W. Edwards
Blanche Somerville
Emerson
Blair D. Erb
Fred M. Friedman
W. T. Fitts
Oliver H. Graves
Wm. O. Green, Jr.
W. W. Harrison
Geo. Harvey, Jr.
Robert S. Hill
C. L. Holmes
G. B. Hubbard
Chester K. Jones
G. Frank Jones
Leland M. Johnston
Duvall H. Koonce
James A. Langdon,
Jr.
Harold T. McIver
Frank A. Moore
H. N. Moore
A. J. Mueller
Lamb B. Myhr
R. M. Neudecker
John B. Nuckolls
George Pakis, Jr.
L. G. Pascal, Jr.
J. C. Pearce
James A. Phillips
W. M. Phillips
I. E. Powers
John G. Riddler
Wm. H. Roberts
Charles C. Stauffer
James L. Thomas
J. R. Thompson, Jr.
S. Allen Truex
Charles H. Webb
W. Webb Wilson
F. E. Williamson,
Jr.
George B. Wyatt
Paul E. Wylie
H. R. Yarbro
*In Service

MARION COUNTY

Jasper

J. G. McMillan
(Mbr. Hamilton Co.)

South Pittsburg

J. B. Ivavon
(Mbr. Hamilton Co.)
William Headrick,
Jr.
(Mbr. Hamilton Co.)
Eugene Ryan
(Mbr. Hamilton Co.)
Viston Taylor, Jr.
(Mbr. Hamilton Co.)

Whitwell

Cleo Chastain
(Mbr. Hamilton Co.)
Wm. G. Shull
(Mbr. Hamilton Co.)

MARSHALL COUNTY

Lewisburg

Kenneth Brown
J. T. Gordon
Hoyt C. Harris
J. C. Leonard
(Mbr. Maury Co.)
James W. Limbaugh, Jr.
Kenneth J. Phelps
Wm. S. Poarch
J. F. Rutledge
Wm. L. Taylor

MAURY COUNTY

Columbia

D. B. Andrews
Wendell C. Bennett
Mildred Casey
William N. Cook
J. R. Duley
Edward Ewton
Wm. G. Fuqua
C. C. Gardner, Jr.
Daniel R. Gray, Jr.
Valton Harwell
Harry C. Helm
Wm. N. Jernigan
Ralph Kustoff
Ambrose M. Langa
Robin Lyles
George Mayfield
Clay R. Miller
Edwin K. Provost
Warren Rucker
B. J. Vinson
Leon S. Ward
J. W. Wilkes, Jr.
Eleanor Williamson
Thomas K. Young,
Jr.

Mt. Pleasant
Taylor Rayburn, Jr.

McMINN COUNTY

Athens

W. R. Arrants
Karl K. Boyd
Charles T. Carroll
L. D. Curtner
R. W. Epperson
C. O. Foree
W. Edwin Foree
R. Danny Hays
Robert G. Hewgley
Milnor Jones
J. A. Powell, Jr.
Helen M. Richards
L. H. Shields
Robert W. Trotter

Englewood
J. F. Cleveland

Etowah

Wm. K. Frye
S. Boyd McClary, Jr.
John C. Sharp
H. P. Whittle

McNairy County

Adamsville
Harold W. Vinson

Selmer

T. N. Humphrey
Harry L. Peeler

James H. Smith
Montie E. Smith, Jr.

MEIGS COUNTY

Decatur

William M. Davis
(Mbr. McMinn Co.)

MONROE COUNTY

Madisonville

R. C. Kimbrough
F. Houston Lowry
Horace M. McGuire

Sweetwater

J. H. Barnes
W. J. Cameron
Joe H. Henshaw
D. F. Heuer, Jr.
T. A. Lowry
Joe K. Wallace
J. E. Young

Vonore

Troy Bagwell
(Mbr. Knox Co.)

MONTGOMERY COUNTY

Clarksville

Edward R. Atkinson
Carlos B. Brewer
E. P. Cutter
Sam M. Doane, Jr.
J. M. Green
V. H. Griffin
T. K. Hepler
Bryan T. Iglehart
Howard R. Kennedy
J. H. Ledbetter, Jr.
William G. Lyle
James L. McKnight
F. C. Petty
Jack Ross
Byrce F. Runyon
A. F. Russell
M. L. Shelby
D. R. Shipley
Marion E. Spurgeon
Charles A. Trahern
Harold V. Vann
Troy A. Walker
William H. Wall, Jr.
Paul E. Wilson
R. M. Workman

MOORE COUNTY

Lynchburg

F. Harlan Booher
(Mbr. Lincoln Co.)

MORGAN COUNTY

Wartburg

Edgar D. Akin
(Mbr. Roane Co.)
B. J. Smith
(Mbr. Roane Co.)

OBION COUNTY

Kenton

Alden H. Gray
(Mbr. Consolidated Cos.)

Troy

Chesley H. Hill

Union City

J. Kelly Avery
M. A. Blanton, Jr.
Harold D. Butler
H. W. Calhoun
Joe Campbell
Wm. N. Carpenter
B. O. Garner
Dan C. Gary
R. L. Gilliam, Jr.
Lawrence W. Jones
E. P. Kingsbury, Jr.
R. G. Latimer, Jr.
E. McCall Morris
James W. Polk
Malcolm T. Tipton
O. A. Zeller, Jr.

OVERTON COUNTY

Livingston

M. E. Clark

Wm. C. Dowell*
H. B. Nevans
Denton D. Norris
W. G. Quarles

PERRY COUNTY

Linden

B. L. Holladay
Gordon H. Turner,
Jr.

POLK COUNTY

Benton

John H. Lillard
(Mbr. McMinn Co.)

Copperhill

H. H. Hyatt
(Mbr. Hamilton Co.)
J. T. Layne
(Mbr. Hamilton Co.)
W. C. Zachary, Jr.
(Mbr. Knox Co.)

Ducktown

Wm. R. Lee
(Mbr. Hamilton Co.)

PUTNAM COUNTY

Algood

J. T. Moore, Jr.

Cookeville

Jack L. Clark
J. T. Deberry
Kenneth L. Haile
Wm. A. Hensley, Jr.
W. R. Jouett
Robert V. Larrick
Jere W. Lowe
William Mattson
Thurman Shipley
Wm. S. Taylor
J. Fred Terry
Claud M. Williams

Monterey

C. A. Collins
T. M. Crain

RHEA COUNTY

Dayton

Albert C. Broyles
(Mbr. Hamilton Co.)
Lester F. Littell
(Mbr. Hamilton Co.)
J. J. Rodgers
(Mbr. Hamilton Co.)
W. A. Thomison
(Mbr. Hamilton Co.)

Spring City

Conrad L. Grabeel
(Mbr. Roane Co.)

ROANE COUNTY

Harriman

A. Julian Ahler
Thomas L. Bowman
Elbert C. Cunningham
(Mbr. Smith Co.)
Fred J. Hooper
Lewis T. Howard
L. Stratton Jones
L. A. Killeffer
John R. Sisk

Kingston

Carl Henry
James A. Hoffmeister
Chas. W. Moorefield
Nat Sugarman

Oak Ridge

(See Anderson Co.)
Gould A. Andrews
Robt. P. Ball
R. R. Bigelow
Marshall Brucer
Louis Bryan
(Mbr. Davidson Co.)
Chas. Congdon
Betty Cooper
John P. Crews
Kenneth Crounse
Dexter Davis
John DePersio
Robt. E. DePersio

J. L. Diamond
Earl Eversole
T. Guy Fortney
C. B. Gurney
William P. Hardy
J. M. Hays
William B. Holden
R. A. Johnson
Harvey Keese, Jr.
Avery P. King
Ralph Kniseley
Thomas A. Lincoln
Lynn F. Lockett
Joseph S. Lyon
Paul R. Marsh
Dana W. Nance
Bill M. Nelson
Etna Little Palmer
Elmer L. Parrott
Lewis F. Preston
William W. Pugh
Charles J. Ragan
Thos. L. Ray
Richard Rucker
Henry B. Ruley
Beecher W. Sitterson
Paul E. Spray
Charles R. Sullivan
Daniel M. Thomas
David A. White
Gino F. Zanolli

SEQUIATCHIE COUNTY

Dunlap

Charles Graves
(Mbr. Hamilton Co.)
D. Clifford Ludington, Jr.
(Mbr. Hamilton Co.)

SEVIER COUNTY

Gatlinburg

Ralph H. Shilling

Seymour

Kyle O. Rutherford

Sevierville

Troy J. Beeler*
R. A. Broady
John M. Hickey, Jr.
R. A. McCall
Chas. L. Roach
Robert F. Thomas
O. H. Yarbber

SHELBY COUNTY

Arlington

Malcolm A. Baker

Collierville

R. F. Kelsey

Cordova

C. A. Chaffee

Forest Hill

J. E. Clark

Geismantown

John T. Carter, Jr.

Memphis

Sara E. Abbott
Robert F. Ackerman
John Q. Adams
L. H. Adams
Ralph M. Adding-ton
Henry L. Adkins
Justin H. Adler
Lorin E. Ainger
Garabed H. Aivazian
Albert M. Alexander
James E. Alexander
C. D. Allen
Chester G. Allen
F. Pearson Allen
Frank S. Allen
Robert G. Allen
F. H. Alley
Jacob Alperin
James L. Alston
Lawrence D. Amick
J. P. Anderson
Lewis D. Anderson
Sam B. Anderson,
Jr.
William F. Andrews
Donald N.
Anishanslin
D. H. Anthony
Robert A. Anthony
Blake Arnoult
J. M. Aste
H. E. Atherton
Leland L. Atkins
David F. Austin
Edgar L. Austin
Richard L. Austin
W. W. Aycock
J. C. Ayres, Jr.
John W. Baird
J. Earl Baker
George F. Bale
A. L. Ball
Aden W. Barlow, Jr.
James R. Barr
John M. Barron
Jerome N. Barrasso
Robert Basist
John C. Beard, Jr.
G. H. Bassett

RUTHERFORD COUNTY

Murfreesboro

Carl E. Adams
W. Stanley Barham
J. B. Black
J. T. Boykin
John Cason
B. S. Davison, Jr.
David T. Dodd
Paul C. Estes
R. James Garrison
S. C. Garrison, Jr.
Dean W. Golley
(Mbr. Hamilton Co.)
James E. Hampton
T. Gilbert Gordon
Richard E. Green
Sam H. Hay
R. D. Hollowell
J. K. Kaufman
Lois M. Kennedy
Chas. W. Lewis
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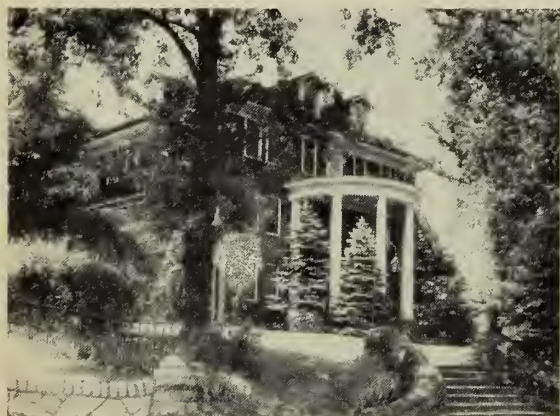
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